Panasonic

Operating Instructions

PC Software Package

Model No. WV-ASC970

Extension Software

Model No. WV-ASE901

Before attempting to connect or operate this product,
please read these instructions carefully and save this manual for future use.

The model number is abbreviated in some descriptions in this manual.

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Introduction

■ Overview

The WV-ASC970 is distributed video security system software capable of supporting up to 64 security system domains. The WV-ASC970 system domain can work as a standalone system or together with other domains to form a large-scale video security system.

The WV-ASC970 can be installed with a specified standard Server PC running specified Linux OS.

For each Server PC based domain, it not only manages Network devices based IP video switch node, but also supports SX650 matrix-based analog video switch node.

WV-ASC970 CD-ROM includes both system software and administration console software (Admin Console). The Administration Console software is installed on Windows based PC and can creates both local and global database for Domain Servers.

■ Trademarks and Registered Trademarks

- Microsoft, Windows, and Internet Explorer are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Other names of companies and products contained in these operating instructions may be trademarks or registered trademarks of their respective owners.

■ Network Security

As you will use this product connected to a network, your attention is called to the following security risks.

1. Leakage or theft of information through this product.
2. Use of this product for illegal operations by persons with malicious intent.
3. Interference with or stoppage of this product by persons with malicious intent.

It is your responsibility to take precautions such as those described below to protect yourself against the above network security risks.

- Use this product in a secured network.
- If this product is connected to a network that includes PCs, make sure that the system is not infected by computer viruses or other malicious entities (using a regularly updated anti-virus program, anti-spyware program, etc.).
- Protect your network against unauthorized access by restricting users to those who log in with an authorized user name and password.
- Apply measures such as user authentication to protect your network against leakage or theft of information, including image data, and authentication information (user names and passwords).

■ Software License (Licence)

This product includes a software component that is licensed by Info-Zip. For more details, refer to "Readme" file in the CD-ROM.

■ Support devices and versions

Refer to "Readme" file in the CD-ROM.

■ Reference

- WV-ASC970 Admin Console User's Guide
- PC Software Package WV-ASM970 Series Help file
- MPEG2 Encoder WJ-GXE900/MPEG2 Decoder WJ-GXD900 Operating Instructions (NTSC model only)
- Digital Disk Recorder WJ-HD300/WJ-HD300A/WJ-HD616/WJ-HD716/WJ-RT416 Series Operating Instructions
- Network Disk Recorder WJ-ND200/WJ-ND300/WJ-ND400/WJ-NV200 Series various Instructions
- Matrix Switcher WJ-SX650 Series Operating Instructions
- Panasonic Network Cameras' Instructions
- Network Interface Unit WJ-NT304/WJ-NT314/WJ-GXE500/WJ-GXE100 series Operating Instructions
- Network Video Decoder WJ-GXD400 series Setup Instruction
- System Controller WV-CU950 Series Operating Instructions
- EBL512 fire alarm system Operating Instructions

■ What is IP switch node

IP switch node means a switch node that consists with IP network devices (Panasonic Network Cameras, Network Disk Recorder, Network interface unit and Network Video Decoder).

Terms and Definitions

■ Video Switch Node

A video switch node is a device or a group of devices that are capable of performing a video switch from any of its video inputs to any of its video outputs. In the WV-ASC970 based system, there are two types of video switch nodes: digital switch node and analog switch node.

IP switch node is a digital switch node which can include network cameras, network disk recorders, network interface units and network video decoders.

Analog video switch node is mainly formed with matrix switch devices, matrix control devices, matrix OSD devices and matrix digital I/O devices. The system currently supports both SX650 and SX850 switch nodes.

■ Video Link

A video link is a connection that can pass video from one video switch node to another. It can only transfer video in one specified direction.

■ Video Path

A video path is a connection between video source and video destination, which consists of one or more video links.

■ Server PC (CPU)

Server PC is a Linux-based server computer with WV-ASC970 system software that manages all the system resources and system devices within a system domain. It usually refers as a system domain computer. Panasonic recommend using certain model number described in "Readme" file.

■ System Unit

System unit refers to a Server PC.

■ System Domain

A system domain is an entity that contains one system unit, up to 64 system controllers, only one digital video switch node, and only one analog video switch node. The domain is capable of performing system tasks as an independent entity, or working with other domains to create a distributed network security system. In a WV-ASC970 based system, the system assigns its domain number equal to its unit number.

An analog video switch node is always inside a system domain, while a digital video switch node can be across more than one domain.

■ System

A system is a collection of one or more system domains.

■ Area

An area is an entity that groups together controllers and monitors.

Important:
- To control the EBL512, it is necessary to register the license for the Extension Software WV-ASE901 (option) additionally.

■ Operator Functions

● Operator Area Changes

The system can be divided into multiple areas (up to 64), and an operator can change from one area to another if they have the necessary permission.

● Operator Log On and Off

Each system operator is assigned a user ID and password in the Admin Console. A user ID and password are required for any operators to log on to the system. System administrators can decide to automatically log operators off if there is no activity for a pre-defined time period.

Note:
- WV-ASM970 can use alphanumeric characters to logon. This is registered by WV-ASC970 Admin Console.

● Operator Class

The system allows administrators to define operator classes (up to 16) with up to 35 different privileges for both local and global operators.

● Operator Priority

The system administrator can assign a priority to each operator. When two operators compete for system resources, only the operator with the higher priority gets the resources. Refer to the Priority Rules section for more details.

■ Global Video Switch and Video Routing

This function allows operators to switch video from one video source to another, if the permission is granted. For multiple operators competing for the same resource, it only allows the highest priority operator to perform this function. The next highest priority operator gains control when the highest priority operator releases the resource. Here is a sample operation to switch video from local camera number 1 in domain 1, to another camera number 1 in domain 2, on a local monitor number 1.

1. Login to System Controller: Enter 500 for ID and enter 500 for password (Global Operator).
2. Select monitor 1: Enter 1 and press MONITOR key.
3. Select local camera 1: Enter 1 and press CAMERA key.
4. Select global camera 1 (Unit2's camera 1): Enter 200001 and press CAMERA key.

Note:
- Format: Unit (Domain) id (2) + Camera number (1). E.g. 200001 (Unit 2, Camera 1)
  (Note that first entry digit must be non-zero, and must not exceed eight digits).
- Only Global Operator can access foreign domain resources.

Please note that first entry digit must be non-zero, and must not exceed 2 digits. Also, entry will overflow if the domain ID entered is greater than 64.

Note:
- For a local camera selection, just enter the logical camera number. (Refer to p. 39.)

■ Global Video Camera Control and Operation

● Global Camera Seize

Operators must seize a camera in order to perform camera operations. Following the steps in Global Video Switch and Video Routing (refer to p. 8), you should be able to seize a camera 200001, which means a camera in domain 2 with a camera ID of 1.

● Camera Control

The system provides operators with camera control functions. The supported functions are: pan, tilt, zoom, focus, and iris.

● Camera Operation

The system provides operators with the following camera operation functions:
- Camera menu control (analog switch node only)
- Camera preset call and programming
- Camera receiver control

■ Global Video Recorder Control and Operation

● Global Recorder Selection

Operators must seize a hard disk recorder and/or network disk recorder in order to perform recorder operations. After Global Video Switch and Video Routing (refer to page 8), you can seize a recorder 200001, which means a recorder in domain 2 with a recorder ID of 1.

● Recorder Basic Operation

The system provides operators with the following video recorder functions:
- Recording
- Playback, pause, and stop
- Fast-forward and rewind playback at different speeds (digital disk recorder only)
- Video input channel selection (digital disk recorder only)
- Multiscreen segment switching (digital disk recorder only)

Note:
- For the playback, there are restrictions below.
  In the 6-screen, WJ-GXD400 does not support 4VGA (1 280 x 960) or more in the VGA screen.
  In the 3-screen, WJ-GXD400 support up to 4VGA (1 280 x 960) in the large screen.

● Recorder Search Functions

The system provides operators with the following recorder search functions:

- Date-and-time search playback
- Recording event search (Thumbnail or list search) (digital disk recorder only)
- VMD search (Video motion detection search) (digital disk recorder only)

Note:

- Whether these functions are available or not depends on recorder model.

● Recorder Menu Functions

The system provides operators with the following recorder menu functions:

- Recorder setup menu (digital disk recorder only)
- Disk selection menu (digital disk recorder only)
- A – B repeat playback menu (digital disk recorder only)
- Filter cancellation menu (digital disk recorder only)

Note:

- Whether these functions are available or not depends on recorder model.

● Recorder Instant Playback Operation

The system provides operators with the instant playback operation for a seized global camera.

■ Global Tour Sequences

● Local Monitor Seize

The system allows global operators to start and control a tour sequence from another system domain. Before tour sequence operation, a local monitor must be seized. Here is the sample procedure to seize local monitor number 1 in domain 1:

1. Login to System Controller: Enter 500 for ID and enter 500 for password (Global Operator).
2. Select monitor 1: Enter 1 and press MONITOR key.

● Tour Sequence Operation

Tour sequence operations include start, stop, pause, run, next step, and previous step. Here is the sample to start a tour sequence:

Run global tour sequence 1(Domain 2's tour sequence 1):
Enter 20010001 and press TOURSEQ key.

Note:

- Format: Unit (Domain) id (2) + Area number (1) +Tour number (1). E.g. 20010001
- Only Global Operator can access foreign domain resources.

Please note that the first entry digit must be non-zero, and must not exceed 2 digits. Also, the entry will overflow if the domain ID entered is greater than 64.

Note:

- To select a local tour sequence, just enter the logical tour sequence number. (Refer to p. 45.)
- The system supports up to 256 tour sequences running.
- During 3 seconds dwell time in case of WJ-GXD400, the video and OSD display will delay according to switching channel numbers.

■ Group Preset

● Local Monitor Seize and execute

The system allows operators to execute a group preset in only local domains. Before starting a group preset start, a local monitor must be seized. Be sure that the group preset monitors are not seized by operators with higher priority.

■ Group Sequences

● Local Monitor Seize

The system allows operators to start and control a group sequence in only local domains. Before starting a group sequence operation, a local monitor must be seized. Be sure that the group sequence monitors are not seized by operators with higher priority.

● Group Sequence Operation

Group Sequence operations include start, stop, pause, run, next step, and previous step. (Refer to p. 45.)

● Group Sequence Priority

If another operator with higher priority has seized a Group Sequence monitor, that monitor will maintain the original operator priority.

Note:

- Group Sequence monitors should be the same in each step of sequence and less than 33.
- During 3 seconds dwell time in case of WJ-GXD400, the video and OSD display will delay according to switching channel numbers.
- Group Sequence is not restored after reboot or switchover.
- When an operator select one of running group sequence monitor that is seized by other operator with same priority, the sequence keeps running.
  When a operator seized one of running group sequence monitor that is not seized by the other operator with same priority, the sequence stops.

■ Global Camera Numbering

This function allows operators to select global camera by just input a logical camera number that is unique number in the whole multiple domains system. The global camera number can be assigned from 1 to 9999999.

● WV-ASC970 Admin Console Setting

If operators would like to use global camera numbering, the system administrator should turn on the global camera numbering select check box in the WV-ASC970 Admin Console CPU screen first. Then he/she retrieve all camera databases from each domain.
And then he/she should assign the global camera number to each domain's camera on the WV-ASC970 Admin Console screen manually.

Note:

- The assigned global camera numbering database is included in the WV-ASC970 Admin Console global database. It is necessary to download not only local database, but also global one.
- In the multiple domains system, the global camera numbering and the current numbering cannot be mixed up. It is necessary to download same global database to each domain.

● Global Camera Numbering Setting Example

Global Logical Camera Number	Unit ID	Local Logical Camera Number
2043	3	1
2044	2	2
2045	1	3
2046	3	3

● Operation Example

1. Login to System Controller: Enter 500 for ID and enter 500 for password (Global Operator).
2. Select monitor 1: Enter 1 and press MONITOR key.
3. Select a global camera 2043: Enter 2043 and press CAMERA key.
4. Then the Unit3's camera 1 is displayed on the monitor 1.

Note:

- Only Global Operator can access foreign domain cameras.
  In above example, the local operator in the Unit 3 cannot select camera 2044 and 2045.
- When a local operator performs the camera NEXT/PREV operation (or +/- key operation), the foreign domain cameras are skipped.
- If there is no video link, operator cannot select the foreign domain cameras.

● Global Tour Sequence Over the domains

By using global camera number, the system administrator can configure the Global Tour Sequence over the domains. Only Global Operator can see all steps on the tour. The local operator can see only local cameras in the tour.
The global tour sequence over the domains can be assigned from 1 to 9999 and maximum records are 5000.

● Return to Current Numbering

If operators would like to return to the current numbering, the system administrator should turn off the global camera numbering select check box in the WV-ASC970 Admin Console CPU screen.

■ Alarm Programming and Handling

● Program the Alarm

This function allows administrators to program alarms, assign alarm display targets, and define alarm actions.

● Control Alarm

Alarm controls are operator functions. These functions allow the highest priority operator to seize the alarm and control it. These functions also allow the next highest priority operator to gain control after the highest priority operator releases the alarm.
The alarm controls include:

- Arm and disarm alarms
- Acknowledge active alarms
- Reset acknowledged or active alarms

The system also supports automatically resetting and acknowledging alarms through configuration by the Admin Console.

● Alarm Action

The system supports the following alarm actions:

- Camera spots (both local and global)
- Tour sequences (both local and global)
- Group sequence
- Text display (Only WJ-SX650 or WJ-SX850 switch node)

The system supports up to 10 alarm actions, and allows operators to control acknowledged alarm actions.

Note:

- The system can handle up to 64 alarms at the same time. In case of more than 64 alarms, some delay happens before alarm actions.
- If a higher priority operator seize the alarm target monitor, the alarm action is not executed. In this case, the target monitor connected to WJ-GXD400 shows red frame, while the monitor connected to WJ-SX650 or WX850 blinks OSD texts.

■ Alarm Export to other Domains

● Alarm Export Function

This function allows a local alarm to export to other system domains.

● Assign Alarm Export in WV-ASC970 Admin Console

In the WV-ASC970 Admin Components screen, select the Alarm Export tab. From there, you can edit an alarm to be exported to multiple system domains (units). The alarm ID has the following format:

Unit (Domain) id (2) + Alarm id (1). E.g. 20001

In the above format, the domain ID has up to 2 digits and its range is from 1 … 64. The domain ID here is also called alarm source domain, which means that the alarm originates from that domain.

● Setup an Exported Alarm as Global Alarm source in WV-ASC970 Admin Console

After creating an alarm to be exported to a destination domain, an administrator must enter the alarm information into the destination domain alarm database using its WV-ASC970 Admin Console.

In the WV-ASC970 Admin Console main menu, select Records from the Alarm command on the Components menu. For alarm Source, select the source type Global Alarm and ID to 20001 (in the above case).

● Reset Exported Alarm Simultaneously

In case that the Global Alarm Reset Synchronization check box in WV-ASC970 Admin Console is turned on, when an operator reset the exported alarm in local unit, the exported alarms in other remote units are reset simultaneously.

■ Event Operation

The function allows administrators to program system events. The event function currently supports following operations:

- Camera spot
- Tour sequence
- Group Preset
- Group Sequence
- Arm and disarm alarm
- Up to 4 system modes

Note:

- The event function does not support the system modes during switchover in the redundant system.

■ Digital Input and Output Functions

This function allows operators to select and set digital output ports. The system alarm function can program the digital output ports as part of the alarm state change indication. The system alarm function can also program the digital input ports as alarm trigger sources.

■ System-Wide Log View

The system supports the following system logs:

- Operator log
- Alarm log
- Video Loss log
- Switch log

In the WV-ASC970 Admin Console main screen select the **Tools, Logs, and System** links to view system wide user logs and alarm logs.

Note:

- Each log file is saved based on pre-defined frequency in the "sys.ini" file. Also when the log size reaches approximately 500 KB, the new file is created.
- The Switch log takes all switching information between monitor and camera.

■ Time Synchronization

The System Server can work as a stand-alone time server for IP switch node devices. Refer to WV-ASC970 Admin Console User's Guide to setup time server.

■ Support WJ-HD616/WJ-HD716 as IP switch node

The System Server can handle the WJ-HD616/716 as an IP switch node.
Users can see the analog camera video connected to WJ-HD616/716 on WJ-GXD400 monitor or WV-ASM970 Video Window. Refer to Appendix 3.

■ Support WJ-HD309A/316A as IP switch node

The System Server can handle the WJ-HD309A/316A as an IP switch node.
Users can see the analog camera video connected to WJ-HD309A/316A on WV-ASM970 Video Window.

■ Support Camera Stream 1 or 2

In order to reduce the commands between the WJ-GXD400 and network cameras, The System Server can specify the camera stream number 1 or 2, and image capture size of JPEG format for the WJ-GXD400 based on WV-ASC970 Admin Console settings.

■ Support Multicast Auto Start

In order to display one network camera video on multiple monitors, the System Server can turn on the multicast streaming function in the camera. The System Servers send the Multicast Auto Start command to system wide cameras based on WV-ASC970 Admin Console global settings.

Note:

- When users use this feature, the network administrator should take care of the network band width.
- Also in the WV-ASC970 Admin Console, the CAMERAS menu requires the Access Level 1 (Administrator) User name and Password for each camera.

■ Support Internet Mode (Over HTTP)

The WV-ASM970, Version 6.0 or later, can receive MPEG-4 or H.264 images via the Internet.
The System Servers send the Internet Mode On command to system wide cameras based on WV-ASC970 Admin Console camera and encoder settings.

Note:

- WJ-GXD400 does not support Internet Mode.

■ Support Third Party I/O-Ethernet Convertor

The System Server can support the Third Party I/O-Ethernet Convertor and handle the I/O alarm triggered by the convertor. The support model numbers are described in the readme file.

■ Support Audio Control for WV-ASM970

The WV-ASM970, Version 3.0 or later, supports the Audio ON/OFF control for the WJ-GXD400 through the System Server. It can turn on or off the audio signal output from an IP switch node device only when users select a monitor that is assigned to the channel #1 of the WJ-GXD400.
In case that the video format is MPEG4 or H.264, when users turn on the audio control, the WJ-GXD400 shows following icon on channel #1 screen. Although there is no audio stream, this icon will be displayed.

(AUDIO ON)

In case that the video format is JPEG, when users turn on the audio control, the WJ-GXD400 shows following icon on channel #1 screen. Because it does not support the audio decode in JPEG format.

(AUDIO MUTE)

The WJ-GXD400 does not support audio ON/OFF control during the playback mode. However, users turn on the audio before playback, the WJ-GXD400 keeps the audio output during the playback.

■ Alive Monitoring

The System Server checks whether Matrix Switchers, Hard Disk Recorders, IP cameras, Network Disk Recorders and IP Encoders are alive or not. Users can know the status of these devices in WV-ASM970 Operation Screen and see the logs of alive monitoring in WV-ASC970 Admin Console's Log Manager screen.

■ WJ-ND400 Backup System

When an ASC970 Server detects that Main WJ-ND400 becomes offline or their all hard disk drives become failure, the ASC970 Server sends the latest configuration data of Main WJ-ND400 to Backup WJ-ND400.

■ Fire Alarm System (EBL512) Monitoring

The WV-ASM970, Version 8.0 or later, supports the EBL512 control.
This function is available in specified country. For more detail, please contact to sales company written in the last page of this document.

■ Priority Rules

● Basic Rule

The System Server has the First-Come-First-Serve rule by default when there are same-priority conflicts.
The administrator also can select the Last-Come-First-Serve rule by WV-ASC970 Admin Console.
The First-Come-First-Serve rule is always applied to seizing video links without regard to operator's priority.

● Operator Priority

Operators are controlled by two types of priority. One is Operator priority and other is Controller priority. For priority conflicts between operators, the Server looks first at Operator priority, then at Controller priority.

● Alarm, Schedule and Operator Priority

Between alarm, schedule and operator, alarm carries the highest priority, next is schedule and last is user.

● Global Operator and Local Operator

Only Global Operator can access other domain devices such as camera, recorder and tour sequence. Global Operator is applied same priority rule as well as Local Operator except global access.

● Playback and Camera Control

When a user controls a camera, another user who has lower priority can play back the Digital Disk Recorder or Network Disk Recorder.
When a user plays back the Digital Disk Recorder or Network Disk Recorder, another user who has lower priority can control the camera even if the user priority is lower.

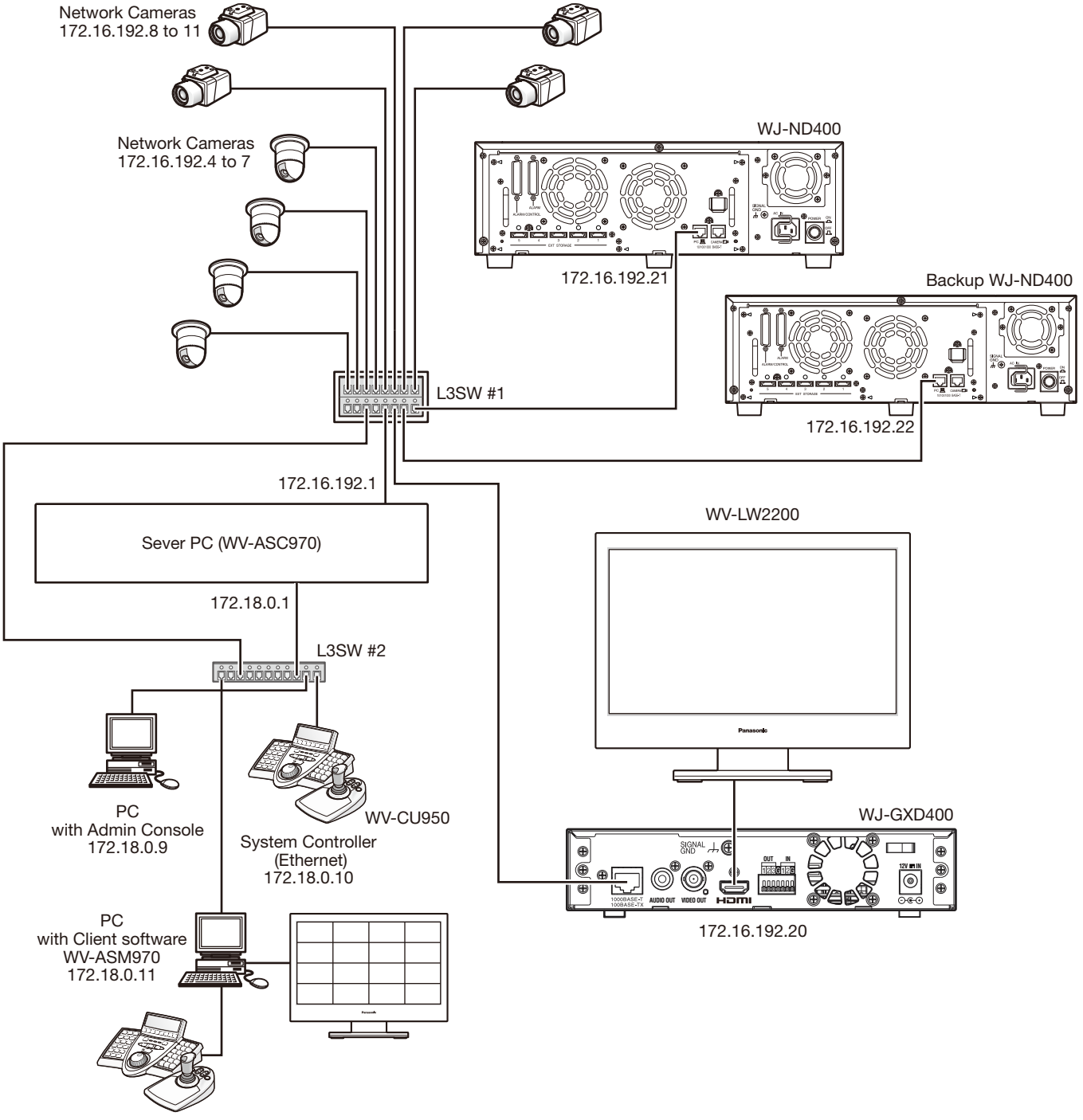
Note:

- In case of Network Disk Recorder, when a user starts the playback, the System Server makes the user priority go down the lowest in order for another user to be able to control the camera. And when the user stops the playback, the server returns the priority to the original. By this manner, if the both user priorities are same, the user who starts the playback will have camera busy after stop the playback.

Basic System Configuration Examples

■ Standard System with IP switch node

Standard System contains one Server. It can handle up to 1024 network cameras, up to 64 decoders and 64 Network Disk Recorders. The IP addresses in the following diagram are the default addresses of the Server network ports.
The system also has WV-CU950 controller, WV-ASM970 Client software for global or local operators, and a PC station with WV-ASC970 Admin Console.
The sample database – 01=standard.adm, #=standard.gdm-and sys.ini file – 01A=sys.ini-for WV-ASC970 Admin Console are provided on the CD-ROM.



● Network Camera Setup

Refer to each network camera Operational Manual.

Network Cam #	IP Address	Subnet Mask	Port	MPEG4	Multicast	Multicast Address	Multicast Port	Alarm Destination Address	Authentication ID/Passwd
1	172.16.192.4	255.255.0.0	80	On	On	239.192.0.21	20000	Server IPA	Default
2	172.16.192.5	255.255.0.0	80	On	On	239.192.0.22	20000	Server IPA	Default
3	172.16.192.6	255.255.0.0	80	On	On	239.192.0.23	20000	Server IPA	Default
4	172.16.192.7	255.255.0.0	80	On	On	239.192.0.24	20000	Server IPA	Default
5	172.16.192.8	255.255.0.0	80	On	On	239.192.0.25	20000	Server IPA	Default
6	172.16.192.9	255.255.0.0	80	On	On	239.192.0.26	20000	Server IPA	Default
7	172.16.192.10	255.255.0.0	80	On	On	239.192.0.27	20000	Server IPA	Default
8	172.16.192.11	255.255.0.0	80	On	On	239.192.0.28	20000	Server IPA	Default

● Decoder WJ-GXD400 Setup

Refer to WJ-GXD400 Operational Manual.

Dec #	IP Address	Subnet Mask	Port	OSD Position			Schedule	Authentication ID/Passwd
				Camera Title	Time Date	Additional Info		
1	172.16.192.20	255.255.0.0	80	Left Lower -2	Right Upper +1	Left Lower -1	None	Default

● Network Disk Recorder WJ-ND400 Setup

Refer to WJ-ND400 Operational Manual.

DVR#	IP Address	Subnet Mask	Port	Recorder Ch-Camera link	Camera Setup	Schedule	Authentication ID/Passwd
1	172.16.192.21	255.255.0.0	80	Necessary	Necessary	Always Recording	Default

Either WJ-ND400's PC port or CAMERA port can be used.

● Backup Network Disk Recorder WJ-ND400 Setup

Refer to WJ-ND400 Operational Manual.

Backup DVR#	IP Address	Subnet Mask	Port	Recorder Ch-Camera link	Camera Setup	Schedule	Authentication ID/Passwd
1	172.16.192.22	255.255.0.0	80	Not Necessary	Not Necessary	Not Necessary	Default

Either WJ-ND400's PC port or CAMERA port can be used.
Recorder Ch-Camera link, Camera Setup and Schedule data is transferred automatically by WV-ASC970 server when WJ-ND400 is switched over.

● L3SW #1 Setup

Set a restriction for the multicast packets not to flow to Server PC port.
Valid the IGMP V2 due to support Multicast packets.

● L3SW #2 Setup

Set a restriction for the multicast packets to transfer to the PC with client software WV-ASM970 only.

● Client Software WV-ASM970 PC setup

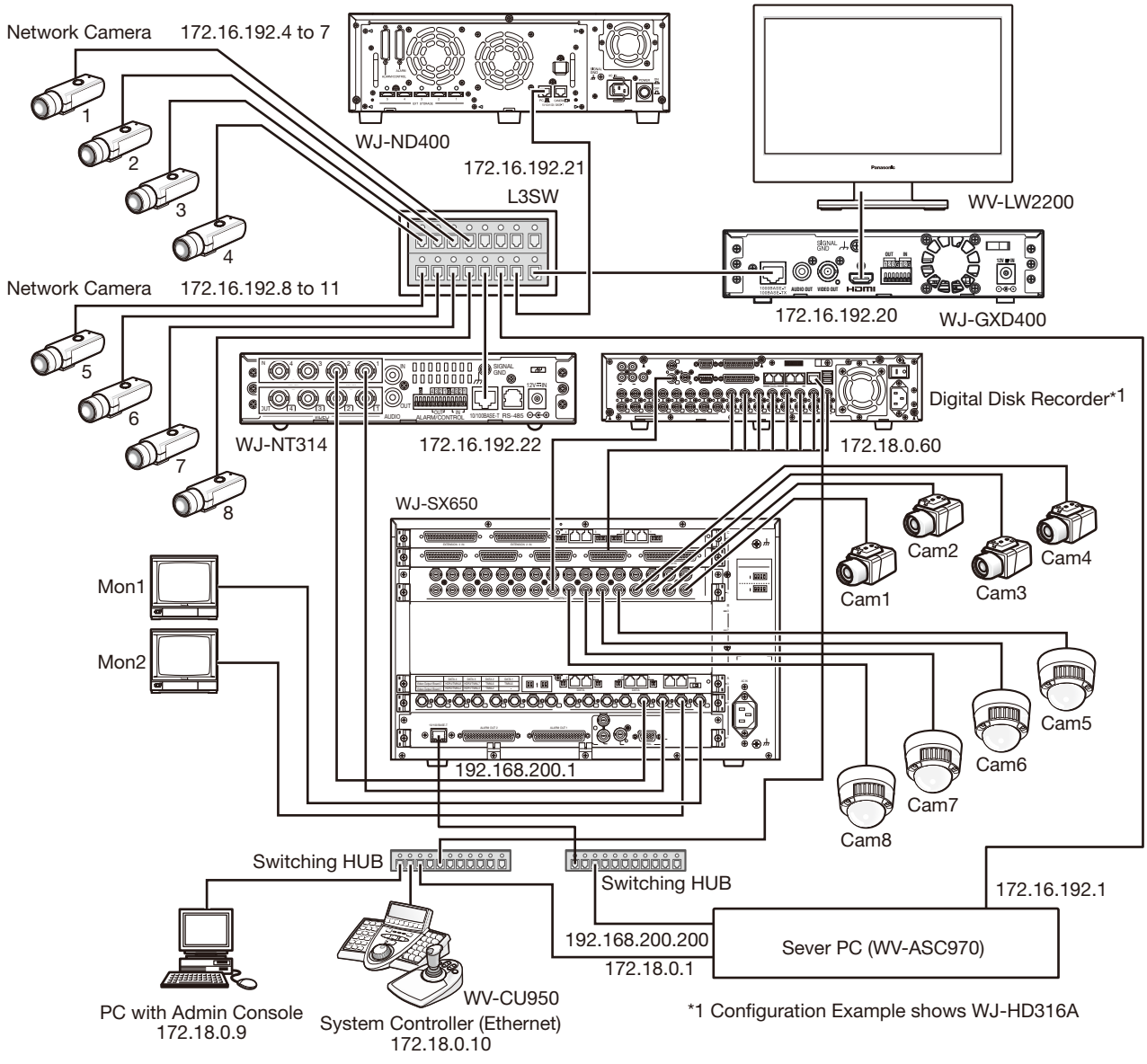
KBD #	IP Address	Subnet Mask
2	172.18.0.11	255.255.0.0

■ Hybrid System with IP switch node and SX650 switch node

The following system contains one IP switch node and one SX650 video switch node. The analog video from SX650 can be seen on the GXD400 monitor. The IP switch node consists of network cameras, WJ-GXD400, WJ-NT314 and WJ-ND400. The SX650 video switch node contains a WJ-SX650 cage with Input, Output and Network board (WJ-PB65E01). There are some video links from WJ-SX650 monitor output to WJ-NT314 coaxial Input. The system also has WV-CU950 controller for system or local operators, and a PC station with WV-ASC970 Admin Console. The sample database – 01=hybrid.adm, #=hybrid.gdm-and sys.ini file – 01A=sys.ini-for WV-ASC970 Admin Console are provided on the CD-ROM.

Note:

- Due to video signal handling between WJ-NT314 and WJ-SX650, WJ-NT314 sometimes sends green picture in short time when video switching happens frequently. (WJ-NT304 has same behaviors.)
- Be sure to separate the analog switch node network from IP switch node network.



● Network Camera Setup

Refer to each network camera Operational Manual.

Network Cam #	IP Address	Subnet Mask	Port	MPEG4	Multicast	Multicast Address	Multicast Port	Alarm Destination Address	Authentication ID/Passwd
1	172.16.192.4	255.255.0.0	80	On	On	239.192.0.21	20000	Server IPA	Default
2	172.16.192.5	255.255.0.0	80	On	On	239.192.0.22	20000	Server IPA	Default
3	172.16.192.6	255.255.0.0	80	On	On	239.192.0.23	20000	Server IPA	Default
4	172.16.192.7	255.255.0.0	80	On	On	239.192.0.24	20000	Server IPA	Default
5	172.16.192.8	255.255.0.0	80	On	On	239.192.0.25	20000	Server IPA	Default
6	172.16.192.9	255.255.0.0	80	On	On	239.192.0.26	20000	Server IPA	Default
7	172.16.192.10	255.255.0.0	80	On	On	239.192.0.27	20000	Server IPA	Default
8	172.16.192.11	255.255.0.0	80	On	On	239.192.0.28	20000	Server IPA	Default

● Decoder WJ-GXD400 Setup

Refer to WJ-GXD400 Operational Manual.

Dec #	IP Address	Subnet Mask	Port	OSD Position			Schedule	Authentication ID/Passwd
				Camera Title	Time Date	Additional Info		
1	172.16.192.20	255.255.0.0	80	Left Lower -2	Right Upper +1	Left Lower -1	None	Default

● Network Disk Recorder WJ-ND400 Setup

Refer to WJ-ND400 Operational Manual.

DVR#	IP Address	Subnet Mask	Port	Recorder Ch-Camera link	Camera Setup	Schedule	Authentication ID/Passwd
1	172.16.192.21	255.255.0.0	80	Necessary	Necessary	Always Recording	Default

Either WJ-ND400's PC port or CAMERA port can be used.

● Network Video Encoder WJ-NT314 Setup

Refer to WJ-NT314 Operational Manual.

ENC #	IP Address	Subnet Mask	Port	Authentication ID/Passwd
1	172.16.192.22	255.255.0.0	80	Default

● Card Cage WJ-SX650 Setup

Refer to WJ-SX650 Operational Manual to set following configuration.

Slot #	Board name	Rotary Switch/Mode	Qty
C	Video Input Board	0	1
B			
A	Video Output Board with Network Board	Output Board (1)	1

Note:

- The SX650 switch node supports up to 512 inputs and 64 output. Refer to the Appendix 1 for the 512 x 64 configuration.

● Digital Disk Recorder WJ-HD316A Setup

Refer to WJ-HD316A Operational Manual to set following configuration.

DVR#	Line Speed	HTTP PORT	DHCP	IP Address	Gateway	Unit Address (System)	Unit Address (Controller)
1	AUTO	0080	OFF	172.18.0.60/16	0.0.0.0	001	001

Note: The WJ-HD316A series should be set the alarm suspend configuration.

● Digital Disk Recorder WJ-HD616/WJ-HD716 Setup

Refer to WJ-HD616/WJ-HD716 Operational Manual to set following configuration.

DVR#	Line Speed	HTTP PORT	DHCP	IP Address	Gateway	Unit Address (System)	Unit Address (Controller)
1	AUTO	0080	OFF	172.18.0.60/16	0.0.0.0	001	001

Note: The WJ-HD616 or WJ-HD716 series should be set the alarm suspend configuration.

● Digital Disk Recorder WJ-RT416 Setup

Refer to WJ-RT416 Operational Manual to set following configuration.

DVR#	Line Speed	HTTP PORT	Server PORT	DHCP	IP Address	Gateway	Unit Address (System)	Unit Address (Controller)
1	AUTO	0080	02000	OFF	172.18.0.60/16	0.0.0.0	001	002

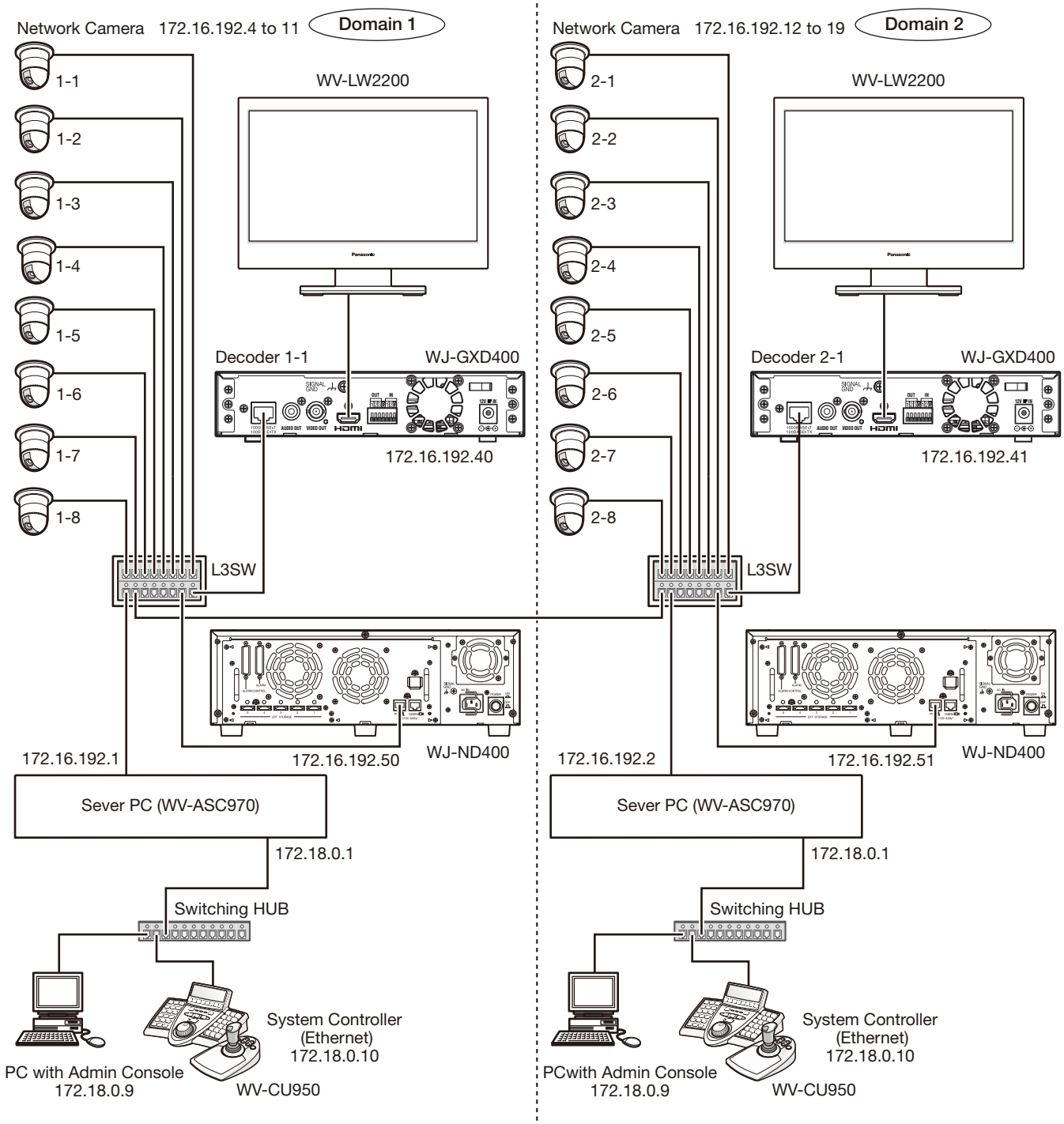
Note: The WJ-RT416 should be set three different passwords as Manager1, Manager2 and Manager3 and these should be match to the Password1, Password2 and Password3 defined in Admin Console's DIGITAL RECORDERS menu.

● L3SW Setup

Set a restriction for the multicast packets not to flow to Server PC port.
Valid the IGMP V2 due to support Multicast packets.

■ Multiple System Domain with Single IP switch node

The following system includes two system domains. Each system domain has IP switch node and can work independently as standard system. In order for both domains to work together, WV-ASC970 global Admin database is necessary in both server PCs.
The sample database – 01=multi_1.adm, 02=multi_2.adm -and sys.ini file – 01A=sys.ini, 02A=sys.ini -for WV-ASC970 Admin Console are provided on the CD-ROM. The sample database-#=multi.gdm-for global database.



● Network Camera Setup

Refer to each network camera Operational Manual.

Network Cam #	IP Address	Subnet Mask	Port	MPEG4	Multicast	Multicast Address	Multicast Port	Alarm Destination Address	Authentication ID/Passwd
1-1	172.16.192.4	255.255.0.0	80	On	On	239.192.0.21	20000	Server IPA	Default
1-2	172.16.192.5	255.255.0.0	80	On	On	239.192.0.22	20000	Server IPA	Default
1-3	172.16.192.6	255.255.0.0	80	On	On	239.192.0.23	20000	Server IPA	Default
1-4	172.16.192.7	255.255.0.0	80	On	On	239.192.0.24	20000	Server IPA	Default
1-5	172.16.192.8	255.255.0.0	80	On	On	239.192.0.25	20000	Server IPA	Default
1-6	172.16.192.9	255.255.0.0	80	On	On	239.192.0.26	20000	Server IPA	Default
1-7	172.16.192.10	255.255.0.0	80	On	On	239.192.0.27	20000	Server IPA	Default
1-8	172.16.192.11	255.255.0.0	80	On	On	239.192.0.28	20000	Server IPA	Default
2-1	172.16.192.12	255.255.0.0	80	On	On	239.192.0.31	20000	Server IPA	Default
2-2	172.16.192.13	255.255.0.0	80	On	On	239.192.0.32	20000	Server IPA	Default
2-3	172.16.192.14	255.255.0.0	80	On	On	239.192.0.33	20000	Server IPA	Default
2-4	172.16.192.15	255.255.0.0	80	On	On	239.192.0.34	20000	Server IPA	Default
2-5	172.16.192.16	255.255.0.0	80	On	On	239.192.0.35	20000	Server IPA	Default
2-6	172.16.192.17	255.255.0.0	80	On	On	239.192.0.36	20000	Server IPA	Default
2-7	172.16.192.18	255.255.0.0	80	On	On	239.192.0.37	20000	Server IPA	Default
2-8	172.16.192.19	255.255.0.0	80	On	On	239.192.0.38	20000	Server IPA	Default

● Decoder WJ-GXD400 Setup

Refer to WJ-GXD400 Operational Manual.

Dec #	IP Address	Subnet Mask	Port	OSD Position			Schedule	Authentication ID/Passwd
				Camera Title	Time Date	Additional Info		
1	172.16.192.40	255.255.0.0	80	Left Lower -2	Right Upper +1	Left Lower -1	None	Default
2	172.16.192.41	255.255.0.0	80	Left Lower -2	Right Upper +1	Left Lower -1	None	Default

● Network Disk Recorder WJ-ND400 Setup

Refer to WJ-ND400 Operational Manual.

DVR #	IP Address	Subnet Mask	Port	Recorder Ch-Camera link	Camera Setup	Schedule	Authentication ID/Passwd
1	172.16.192.50	255.255.0.0	80	Necessary	Necessary	Always Recording	Default
2	172.16.192.51	255.255.0.0	80	Necessary	Necessary	Always Recording	Default

Either WJ-ND400's PC port or CAMERA port can be used.

Basic System Setup Procedure

■ Define a System Domain

● Number of System Domains

By definition, each system domain must have a Server PC. (If it is a redundant system, it must have two Server PCs). The system can consist of up to 64 system domains.

● Domain ID and CPU Unit ID Assignments

For each Server PC, you must assign a Unit ID.

● Enter Unit ID in the WV-ASC970 Admin Console

In the WV-ASC970 Admin Domain menu, select the CPU Units, and enter the unit information into the fields provided.

● Enter Unit ID in the System Configuration File

In each Server PC, there is a system configuration file named sys.ini. You can view and edit the file through WV-ASC970 Admin Console. For each new system domain that is set up, you need to enter the correct system Unit ID in the [UNIT] section of the sys.ini file. The following is the text from the sys.ini file's [UNIT] section.

```
[UNIT]
***{ The unit ID should be the same as the one defined in  }
***{   the Global Admin database for this unit.             }
***{ For single-unit systems, use ID=1.  (ID=0 is invalid)  }
ID=1
```

■ Define IP switch node

● IP switch node

An IP switch node consists of one or more network camera devices (include video encoder) and video decoder devices (WJ-GXD400). An IP switch node can be in a single system domain or across multiple system domains.

● IP switch node and its Domain

An IP switch node can include many camera/encoder and decoder devices. In the case of a single domain system, such as the system on page 18, all the camera/encoder and decoder devices will be assigned to that domain.
The IP switch node can split into multiple system domains. In the case of a multiple domain system, the system designer has to decide which domain the encoder and decoder devices should belong to.
For the system on page 23, we decided that camera 1-1 to 1-8 and decoder 1-1 are in domain 1, while camera 2-1 to 2-8 and decoder 2-1 are in domain 2.
In general, we recommend that you should search for a nearby Server and assign camera/encoder or decoder devices to the same Unit ID of the Server.

● Enter Cameras/Encoders and Decoders in the WV-ASC970 Admin Console

After deciding the Unit ID for each encoder and decoder, the next step is to enter the encoder and decoder device information in the WV-ASC970 Admin Console for the domain.
In the WV-ASC970 Admin Console main menu and selecting IP DEVICES screen, we need to configure the devices here.
Since these devices are part of the IP switch node, select IP from the Switch Nodes command on the Domain menu.

● SX650 Switch Node

SX650 switch node consists of one more WJ-SX650 matrix switcher with WJ-PB65E01 network board. SX650 switch node can only be located within a system domain, and cannot cross over multiple domains. Currently, the system only supports up to one SX650 switch node in a single system domain, and node ID is always set to its domain ID by the system software.

● SX650 Switch Node and its Domain

In case of a single domain system, all the WJ-SX650 matrix switcher with WJ-PB65E01 network board will be assigned to that domain.
In case of a multiple domain system, the system designer has to decide which domain all the WJ-SX650 matrix switcher with WJ-PB65E01 network board should belong to.

● Enter SX650 SUBNODES in the WV-ASC970 Admin Console

After deciding the domain ID for each WJ-SX650 matrix switcher, the next step is to enter the information in the WV-ASC970 Admin Console for the domain.

In the WV-ASC970 Admin Console, **SX650 SUBNODES** screen, we need to configure the devices. Since these devices are part of the SX650 node, select **SX650** from the **Switch Nodes** command on the **Domain** menu. Following are the sample data for WJ-SX650 matrix switcher.

ID	I/F	IPA	BRIDGE	CONTROL	OSD	SWITCH		ALARM	Address [MODE]				EA
						Input	Output		5	6	7	8	
1	1	192.168.200.1	–	1 - 256	1 - 32	1 - 256	1 - 32	–	OFF	OFF	OFF	ON	00.00.00.00.00.00

■ How to Identify a Video Switch Link

● Links between a WJ-SX650 Switch Node and an IP switch node

In order to pass video from one switch node to another, video links are required. Page 20 shows an example of a system with video links. In general, you can find video links in the following conditions:

- From a matrix switch output to a video encoder device.

The above video links can connect two video switch nodes within the same system domain or different system domains.

● Links between two SX650 Switch Nodes

In general, you can find video links from a matrix switch output to a matrix switch input. These links must cross two different system domains.

● Enter Video Links in the WV-ASC970 Admin Console

In the ASC970 Admin Console main menu, select the Routing on the Domain menu. The LINK screen will be activated. Then enter the video link(s) here in order for the system to perform video routing properly. The following table is based on the example from on page 20.

ID	Enable	Video Source			Video Destination				Navigation
		Unit	Switch	Port	Unit	Switch	Dev Id	Ch	Cost
1	✓	1	SX650	3	1	IP	11	1	1
2	✓	1	SX650	4	1	IP	11	2	1

In the above video link table, operators are able to enable or disable a video link. The system will not use a link that is disabled.

Also in the above video link table, the destination Unit ID and source Unit ID are the same. They also can be different in a multiple domain system.

In the example on page 23, there is no video link in the system, and operators can skip this configuration.

■ Define System Operators

● System Operators

System operators are also called global operators or system users. In order to seize a system resource, such as a camera in a foreign domain, the system requires a global operator. When a global operator logs into a system controller, it becomes a global controller.

The global operator is subject to unit partitioning restrictions, where within their domain, she/he will act like a local super user.

● Enter Global Operators in the WV-ASC970 Admin Console (Global Database)

In the WV-ASC970 Admin Console main screen, select **Operators** → **Records** on the **Components** menu. The **OPERATORS** screen will be activated. Then, enter the **operator(s)** information into the fields provided. For global operator(s), you can select one of the four global class levels.

User ID	Password	Priority	Timeout	Name	Class
500	500	2	00:00:00	Global Operator 1	20: Global Level 0
100	123	10	00:00:00	Global Operator 2	20: Global Level 0

● Enter Operator to Unit Partitioning in the WV-ASC970 Admin Console

In the WV-ASC970 Admin Console main screen, select **Operator** → **Records** on the **Components** menu. The **OPERATORS** screen will be activated. Then, select the **Unit** tab and check the partitioning you want to apply to a global operator.

■ Other Setup

● Alarms

To trigger alarms, setup the alarm source devices and register them to Alarm Source database by using Admin Console.

#	Alarm Type	Alarm Source	How to setup	Alarm source setup in Admin Console
1	Camera Motion	analog camera	Turn on MOTION DET setting in dedicated camera menu.	Select Motion (cam)
		network camera	1. Select ON for network device's VMD alarm. 2. Set the Server IP Address to network devices' alarm notification destination IP Address field. Also set the port number 1818.	
2	I/O Port (Dry contact) alarm	analog digital input port in SX850 or SX650 cage	Select SX850 or SX650 node and Register the input port setting to Admin I/O Ports menu	Select I/O Port
		network device (network camera, network decoder, DVR)	1. Select ON for network devices' Terminal alarm. 2. Set the Server IP Address to network devices' alarm notification destination IP Address field. Also set the port number 1818.	Select I/O Port
3	RS232C alarm	External system's RS232C I/F	Select RS232 Controller Model for desired port in Admin Controllers menu	Select RS232
4	Video Loss (any)	One of analog cameras via SX850 or SX650 cage	Turn on Alarm Trigger check box in Admin Cameras menu.	Select Vid Loss (any)
5	Video Loss (cam)	A certain analog camera via SX850 or SX650 cage	Turn on Alarm Trigger check box in Admin Cameras menu.	Select Vid Loss (cam)
6	Global Alarm	Other domains alarms and do not care about alarm type	Select one or more than one domain that the global alarm should be exported in Admin Alarms menu, Export tab, UNIT partition menu.	Select Global Alarm
7	Scene change detection	WV-NP1000 WV-NP1004 WV-NW484S	1. Select ON for NP1000's Scene change detection alarm. 2. Set the Server IP Address to NP1000's alarm notification destination IP Address field. Also set the port number 1818.	Select Scene Change (cam)
8	Command alarm	network camera	1. Select ON for network devices' Command alarm. 2. Set the Server IP Address to network devices' alarm notification destination IP Address field. Also set the port number 1818.	Select Cmd Alm (cam)
9	Communication Error (between camera and recorder)	DVR (except RT416)	1. Set the Port number 1818 for Panasonic alarm. 2. Set the Server IP Address to Panasonic alarm destination IP Address field.	Select Comm Err (cam)
10	Intruder detection	WJ-NT314	See the NT314 Network Operating Instructions.	Select Intruder (cam)
11	Object detection	WJ-NT314	See the NT314 Network Operating Instructions.	Select Object dct. (cam)
12	Capacity Warning	DVR (except RT416)	1. Set the Port number 1818 for Panasonic alarm. 2. Set the Server IP Address to Panasonic alarm destination IP Address field.	Select Capacity Warn (dvr)
13	RAID Down	DVR (except RT416, ND200)	1. Set the Port number 1818 for Panasonic alarm. 2. Set the Server IP Address to Panasonic alarm destination IP Address field.	Select RAID Down (dvr)
14	Thermal Error	DVR (except RT416)	1. Set the Port number 1818 for Panasonic alarm. 2. Set the Server IP Address to Panasonic alarm destination IP Address field.	Select Therm Err (dvr)
15	DVR Error (any of DVR Error)	DVR (except RT416)	1. Set the Port number 1818 for Panasonic alarm. 2. Set the Server IP Address to Panasonic alarm destination IP Address field.	Select DVR Err (dvr)
16	Face Matching	WJ-NV200	1. Set the Port number 1818 for Panasonic alarm. 2. Set the Server IP Address to Panasonic alarm destination IP Address field. 3. Activate the face matching alarm action.	Select Face Match (NV200)

Note:

- "analog camera" stands for Panasonic analog cameras.
- "DVR" stands for Panasonic Digital Disk Recorder / Network Disk Recorder.
- In the redundant system, set both Main and Backup WV-ASC970 Servers' IP Addresses to the alarm notification destination IP Address field of the network device.
- The Capacity Warning, RAID Down and Thermal are also included in DVR Error. For example, if both Capacity Warning and DVR Error are assigned to different alarms and then the Capacity Warning occurs, both alarms are triggered.

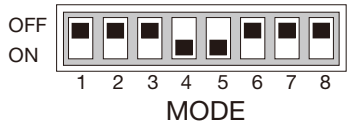
● System Controller WV-CU950 Setup

To add system controllers to the system in Ethernet communication, add an entry to the system controller database through the admin console. You need to assign a controller ID for each controller, and enter the Ethernet address from the bottom of each controller.

Note:

- Refer to the Admin Console User's Guide for details.

The MODE and CONTROLLER No. on WV-CU950 rear panel should be set as shown below.

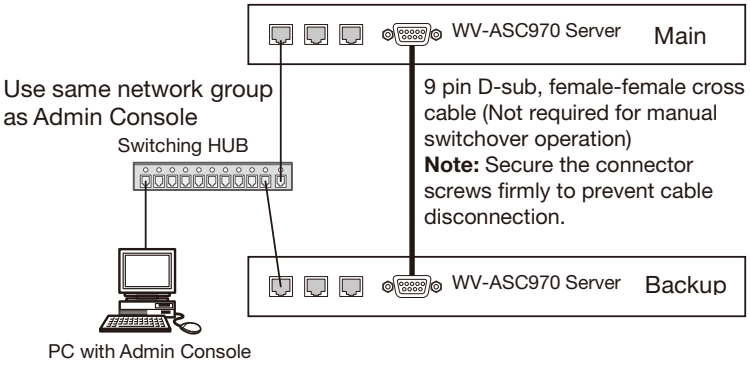
	MODE	CONTROLLER No.
WV-CU 950	Set as shown below.  MODE	Maintain the switch setting as "1".

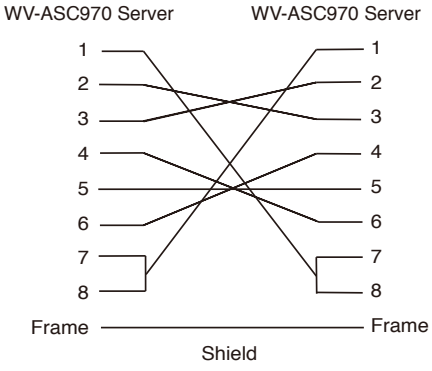
■ Redundant System

When an ASC970 System includes both a Main CPU and a Backup CPU, it is called a Redundant System. In this case, one of the WV-ASC970 Server will be running in the Active mode and will actually be controlling the system operation. The other WV-ASC970 Server will be running in Standby mode and will be following all the system activity in order to take over system operation, in case the Active CPU fails or otherwise can no longer operate.

The WV-ASC970 Admin Console allows an administrator to set and switch the status of the WV-ASC970 Servers on the CPU Unit screen.

● Connection

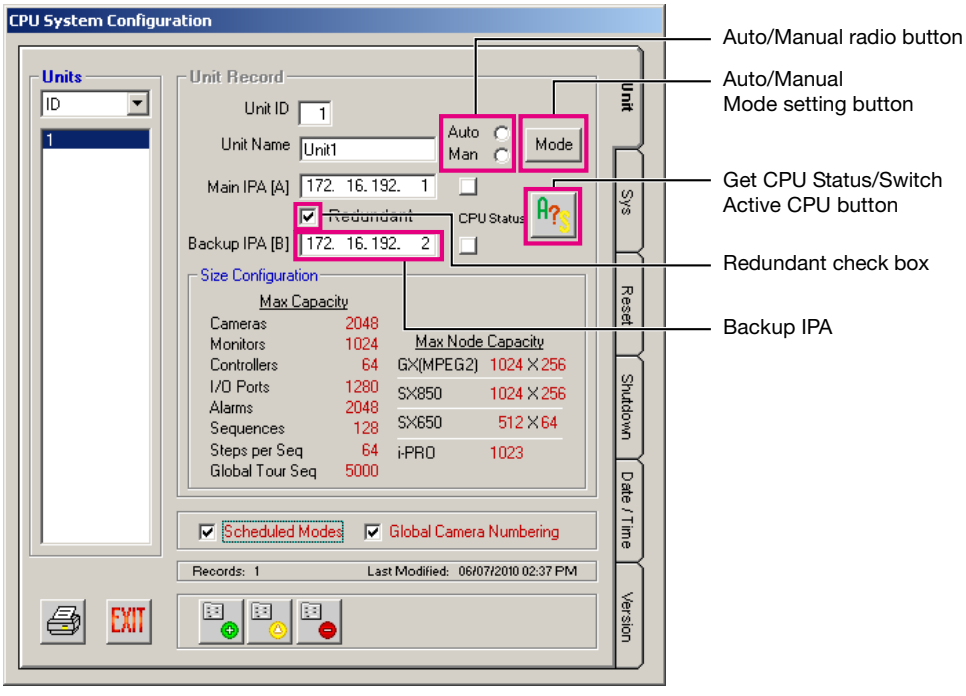

WV-ASC970 Server
Main
Use same network group as Admin Console
Switching HUB
9 pin D-sub, female-female cross cable (Not required for manual switchover operation)
Note: Secure the connector screws firmly to prevent cable disconnection.
WV-ASC970 Server
Backup
PC with Admin Console



9 pin D-sub, female-female cross cable PINOUT

● Configuration and Operation

WV-ASC970 Admin Console Screen



Auto/Manual radio button

Auto/Manual Mode setting button

Get CPU Status/Switch Active CPU button

Redundant check box

Backup IPA

Note:

- This capture screen is an example to show the redundant feature related buttons or fields. Some of details are a bit different according to the WV-ASC970 Admin Console versions.

System Configuration File

If there are more than one serial ports on the WV-ASC970 Server, you need to enter the correct port number in the [REDUNDANT] section of the sys.ini file.

For Manual Switchover Operation

1. Connect the Ethernet cable between the SYSTEM CONTROLLER ports of both WV-ASC970 Servers. (SERIAL ports are not used for MANUAL operation.)
2. Turn on the "Redundant" check box on Admin Console's Domain>CPU Units>Unit tab and input the backup WV-ASC970 Server's IP Address to "Backup IPA" field.
3. Select the "Man (Redundant Manual Switchover)" radio button, and then click the "Mode" button.
4. Put the global database to both WV-ASC970 Servers and reboot both.

Note:
- If the global database is put to only one WV-ASC970 Server, the redundant function does not work properly.

5. By using the Admin Console, click the "Get CPU Status" button on Unit tab.
6. After Admin Console get the current WV-ASC970 status, click the "Switch Active CPU" button. At this point, the dialog box will be displayed. Select "Switchover", then click "OK" button.
7. The Active WV-ASC970 Server reboots automatically, and moves to Standby state. Another WV-ASC970 Server moves to Active state.

For Automatic Switchover Operation

1. Connect the 9-pin D-sub cross cable (locally procured) between the SERIAL ports of both WV-ASC970 Servers, and connect the Ethernet cable between the SYSTEM CONTROLLER ports of the Servers.
2. Turn on the "Redundant" check box on Admin Console's "Domain" > "CPU Units" > "Unit" tab and input the backup WV-ASC970 Server's IP Address to "Backup IPA" field.
3. Select the "Auto (Redundant Auto Switchover)" radio button and then, click the "Mode" button.
4. Put the global database to both WV-ASC970 Servers and turn off both servers.

Note:
- If the global database is put to only one WV-ASC970 Server, the redundant function does not work properly.
- When activating automatic switchover operation, user should not register a controller to the SERIAL port in the CONTROLLERS menu of admin console.

5. Turn on Main WV-ASC970 Server first. After it ups, turn on Backup WV-ASC970 Server.
6. When a fatal application software error happens in the Active WV-ASC970 Server, the Standby one will switchover automatically.
   When a fatal OS system error happens in the Active WV-ASC970 Server, the Standby one may automatically switch-over but the Active WV-ASC970 Server may need to reset manually.

Note:
- If the Standby WV-ASC970 Server also has fatal error, the switchover is not performed.
- When the 9-pin D-sub cross cable is disconnected, the Standby WV-ASC970 Server will become Active, and the Active WV-ASC970 Server will reboot.

WV-ASC970 Redundant Monitor Software

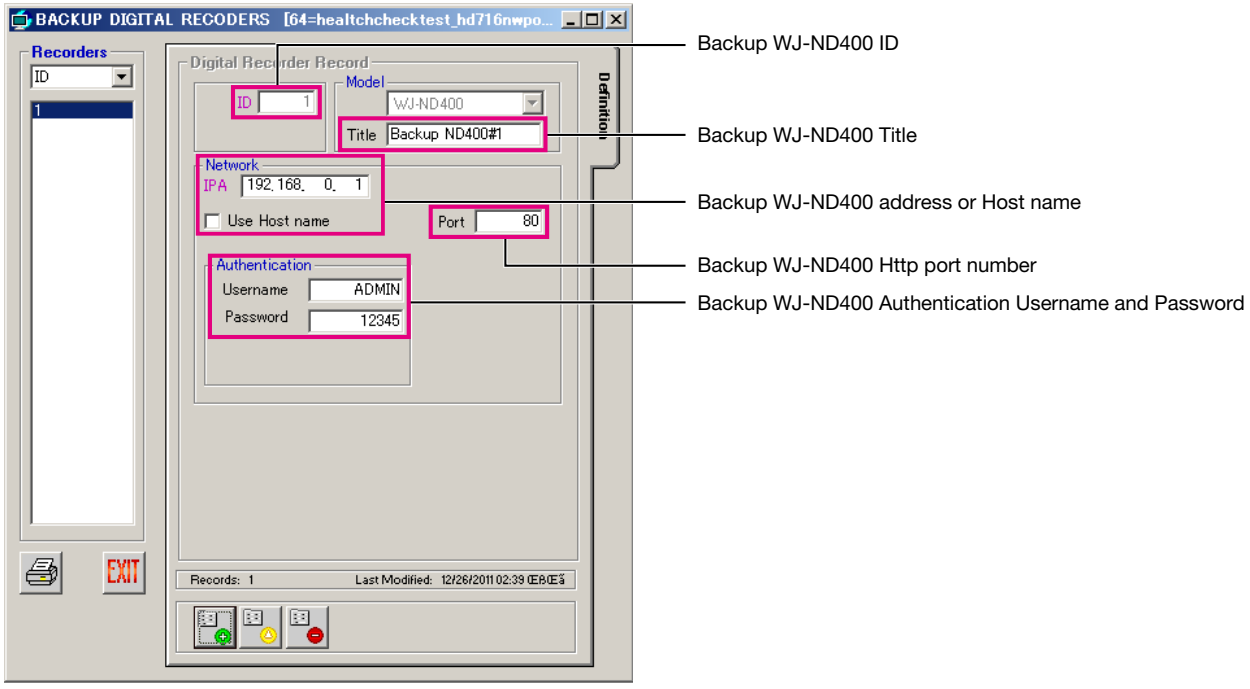
Administrator or Operator can perform the switchover operation by using the "Redundant Monitor" software included in WV-ASC970 CD-ROM. Refer to the "Server Installer/Utility Operation Guide", "Redundant Monitor" section.

■ WJ-ND400 Backup System

When an ASC970 System includes both Main WJ-ND400 and Backup WJ-ND400, it is called the WJ-ND400 Backup System. When the ASC970 Server detects that Main WJ-ND400 becomes offline or their all hard disk drives become failure, the ASC970 Server transfer the latest configuration data of Main WJ-ND400 to Backup WJ-ND400. And then the ASC970 Server can control the Backup WJ-ND400.

● Configuration and operation

WV-ASC970 Admin Console Screen



Note:

- This capture screen is an example to show the redundant feature related buttons or fields. Some of details are a bit different according to the WJ-ND400 Redundant Monitor Software versions.

● System Configuration File (Alive Monitoring)

You can enter the AliveMonitoringTimeout_DVR, AliveMonitoringRetryFrequency_DVR and AliveMonitoringRetryCount_DVR for WJ-ND400 in the [ALIVEMONITORING] section of the sys.ini file.

● System Configuration File (WJ-ND400 Backup)

You can enter the RetrieveFrequency of WJ-ND400 configuration data in the [ND400BACKUP] section of the sys.ini file.

● For Manual Switchover Operation

You can switchover the Main WJ-ND400 to Backup WJ-ND400 manually.
For more details, please refer to the WJ-ND400 Backup Operation Monitor software Help file.

1. Connect the Main WJ-ND400 and Backup WJ-ND400 to the same network.
2. Add the information of Main WJ-ND400 and Backup WJ-ND400 to Admin Console's both Components>Digital Recorders>Records screen and Components>Digital Recorders>Backup Records screen.
3. Put the Admin Console's database to WV-ASC970 Server and then reboot it.
4. In the WJ-ND400 Backup Operation Monitor software, click the "Switchover" button.
5. WV-ASC970 Server transfers the configuration data of Main WJ-ND400 to Backup WJ-ND400.

● For Automatic Switchover Operation

WV-ASC970 Server can switchover the Main WJ-ND400 to Backup WJ-ND400 automatically when it detects that Main WJ-ND400 becomes offline or all hard disk drives of Main WJ-ND400 become failure.
For more details, please refer to the WJ-ND400 Backup Operation Monitor software Help file.

1. Connect the Main WJ-ND400 and Backup WJ-ND400 to the same network.
2. Add the information of Main WJ-ND400 and Backup WJ-ND400 to Admin Console's both Components>Digital Recorders>Records screen and Components>Digital Recorders>Backup Records screen.
3. Put the Admin Console's database to WV-ASC970 Server and reboot it.
4. WV-ASC970 Server detects that Main WJ-ND400 becomes offline or their all hard disk drives become failure.
5. WV-ASC970 Server transfers the configuration data of Main WJ-ND400 to Backup WJ-ND400.

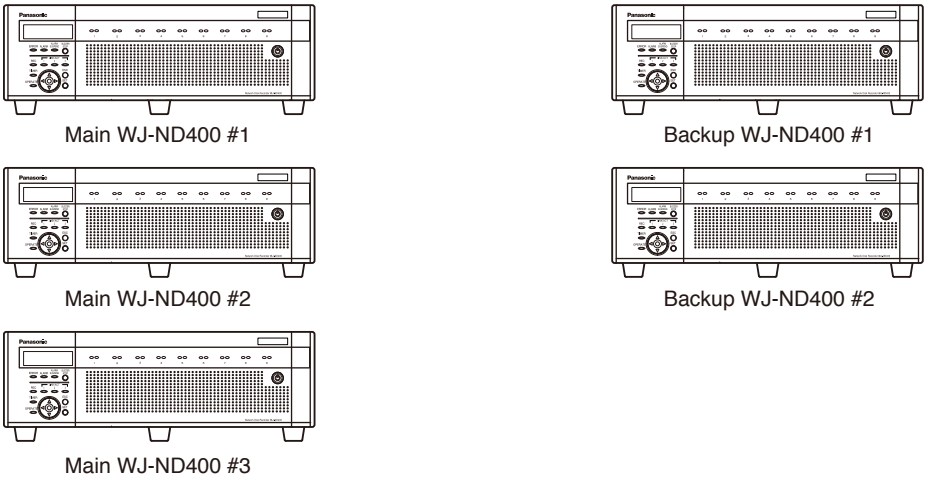
● For Manual Recover Operation (Backup WJ-ND400 to Main WJ-ND400)

You can switchover the Backup WJ-ND400 to Main WJ-ND400 manually. For more details, please refer to the WJ-ND400 Backup Operation Monitor software Help file.

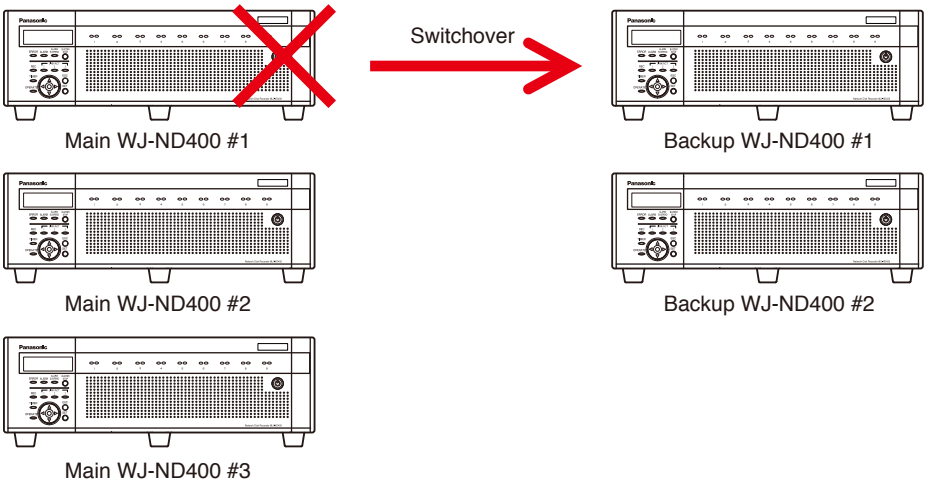
1. In the WJ-ND400 Backup Operation Monitor software, click the "Switchover" button.
2. WV-ASC970 Server transfers the configuration data of Backup WJ-ND400 to Main WJ-ND400.

● Example Case (For Automatic Switchover Operation)

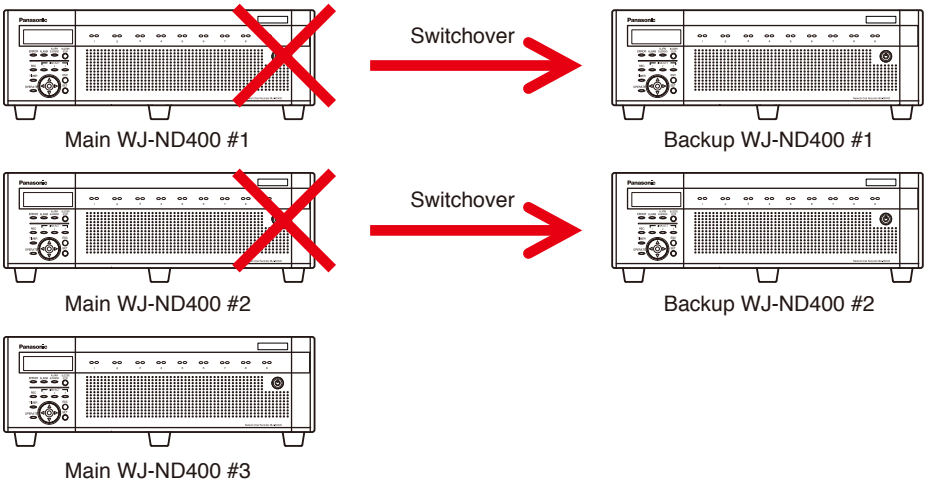
1. WJ-ND400 Backup System contains three Main WJ-ND400s and two Backup WJ-ND400s.



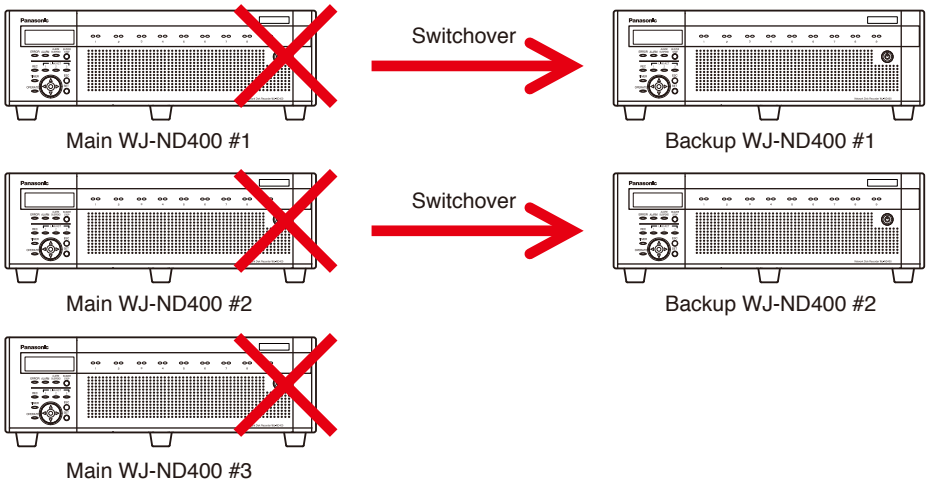
2. WV-ASC970 detects that Main WJ-ND400 #1 becomes offline.
3. WV-ASC970 switches over Main WJ-ND400 #1 to Backup WJ-ND400 #1.



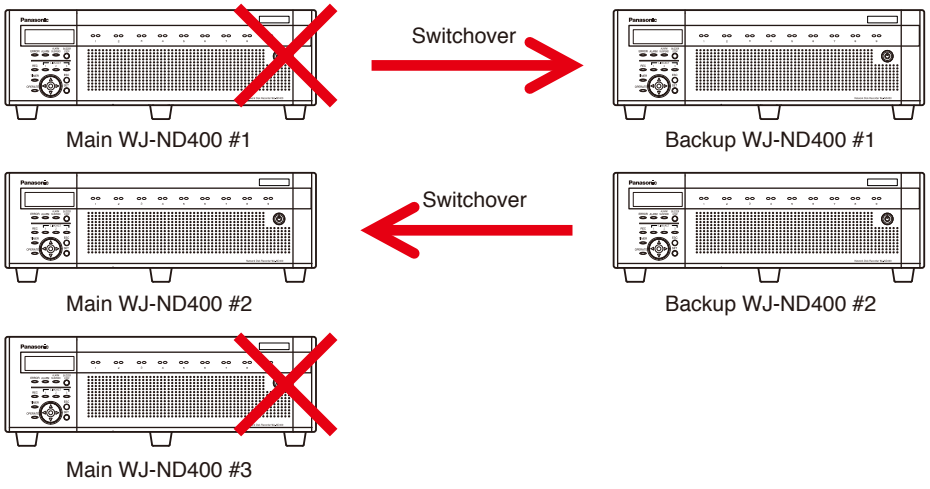
4. WV-ASC970 detects that Main WJ-ND400 #2 becomes offline.
5. WV-ASC970 switches over Main WJ-ND400 #2 to Backup WJ-ND400 #2.



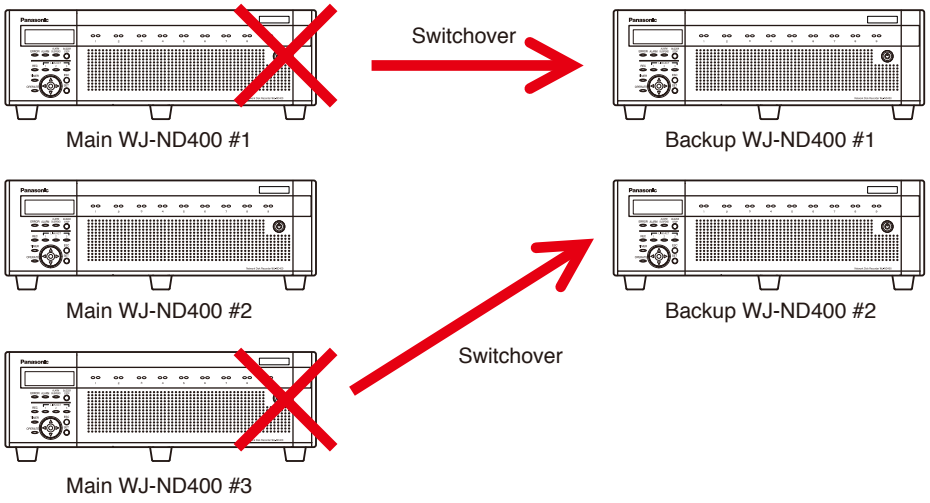
6. WV-ASC970 detects that Main WJ-ND400 #3 becomes offline.
7. WV-ASC970 cannot switch over because all Backup WJ-ND400s are working instead of Main WJ-ND400.



8. WV-ASC970 switches back Backup WJ-ND400 #2 to Main WJ-ND400 #2.



9. WV-ASC970 switches over Main WJ-ND400 #3 to Backup WJ-ND400 #2.

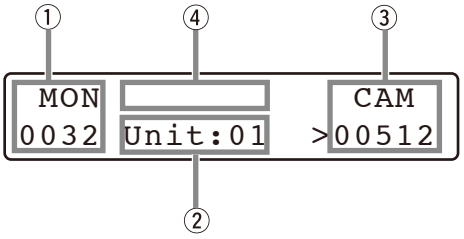


Note

- To use WJ-ND400 Backup Operation, firmware version of WJ-ND400 should be 3.2.
- If all Backup WJ-ND400s are working instead of Main WJ-ND400, WV-ASC970 cannot switch over.
- If all of Backup WJ-ND400s becomes offline or all hard disk drives of Backup WJ-ND400 become failure, WV-ASC970 cannot switch over.
- It is necessary to set the time zone of Main WJ-ND400 and Backup WJ-ND400 as same as WV-ASC970 Server. If they are different, the playback, search and download function of WV-ASM970 doesn't work properly.
- You can see the switchover logs by the WJ-ND400 Backup Operation Monitor software.
- You can switch back from Backup WJ-ND400 to Main WJ-ND400 by WJ-ND400 Backup Operation Monitor software manually.
- It may take over 5 minutes to switch over. During switchover, recording is skipped.
- Once a Main WJ-ND400 is switched over, even if the dedicated Backup WJ-ND400 becomes failure, WV-ASC970 Server doesn't switch over the Main WJ-ND400 to other Backup WJ-ND400.
- If another user is currently configuring the settings of WJ-ND400, WV-ASC970 Sever can't switch over.
- It is necessary that firmware version of Main WJ-ND400 and Backup WJ-ND400 are same.
- Alarm notification destination address of camera is not changed automatically when WV-ASC970 switches over. Please set the alarm notification destination address of camera to both Main WJ-ND400 and Backup WJ-ND400 in advance.
- It is necessary to use User level "LV1" of WJ-ND400 to switch over.
- It is necessary to set the same user name and password to both Main WJ-ND400 and Backup WJ-ND400.
- Even if users starts playback and switches the WJ-ND400, playback is continued for the same WJ-ND400.
- It is necessary to re-select camera through WJ-ND400 when WJ-ND400 is switched over.

LCD Display Descriptions

■ Default Status (LCD Display After Login)



① **Monitor number**
The number of connected monitor is displayed.

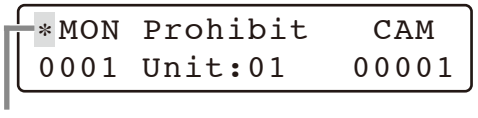
② **Unit number/Status**
The number of connected site will be displayed.

③ **Camera number**
The number of selected camera is displayed.

④ **Input number/Recorder number/Status**
The numeric input, selected recorder number, or status is displayed.

■ Blinking

In this document, grayed (greyed) areas on the LCD illustrations mean blinking.



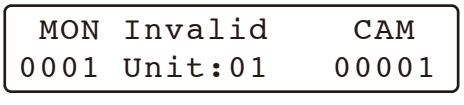
Blinking

■ Messages Displayed on the LCD

The following are examples of LCD display after login.

Note:
- Some parts of LCD displays, described on this document, may differ from the actual status.

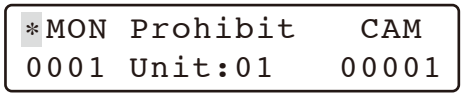
● Invalid



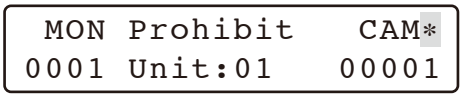
This message is displayed in the following circumstances.
- When you have entered a wrong user ID or password, etc.
- When you have entered a camera number or monitor number, etc. that is not existing.

● Busy

- When a selected monitor is controlled by a higher-level user, "∗" blinks on the LCD. (You cannot control the monitor.)
- When a selected camera is controlled by a higher-level user, "∗" blinks on the LCD. (You cannot control the camera.)
- To cancel the Busy status, select another monitor, camera, or wait until "∗" goes out.

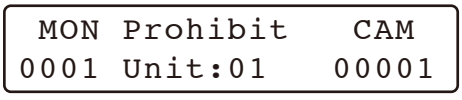


"Busy" status is activated for a monitor.



"Busy" status is activated for a camera.

● Prohibit



- When you have tried an operation not authorized by the system unit, "Prohibit" is displayed on the LCD.
- When you have forgotten to select a monitor before selecting a camera, "Prohibit" is displayed on the LCD.
- After a few seconds, the LCD display will return to the default status.

Login and Logout

■ Operation Start (Login)

1. Turn on the power switches of all system components.

2. Turn on the power of system controller.
   The OPERATE indicator will light up, and the following message will appear on the LCD.

```
Connecting to
        Main CPU ...
```

Note:
- Wait until the following display appears on the LCD.

```
ID:
Unit:01
```

3. Enter the ID number by pressing the numeric buttons.
   Then, press the CAM (SET) button. "PWD" will appear on the LCD.

```
ID:12345
PWD:
```

Note:
- When you have entered a wrong ID number, press the CLEAR button.

4. Enter the password by pressing the numeric buttons.

```
ID:12345
PWD:*****
```

5. Press the CAM (SET) button.
   When the password is correct, "OK" will appear for 2 seconds on the LCD.

```
MON PWD:OK      CAM
    Unit:01
```

Note:
- When the password is wrong, "NG" will appear for 2 seconds on the LCD. In this case, retry the login procedure.

```
ID:12345
PWD:NG
```

Note:
- If you perform the login procedure after resetting the CPU unit or turning on the power of CPU unit, the LCD display may return to Step 2. In this case, wait for approx. 5 minutes until the CPU unit has been started up. Then, retry the login procedure.

■ Operation End (Logout)

You need to log out of the system:
- When leaving the controller
- When system access is no longer required

1. During the login status, press the MON LOCK/LOGOUT button while holding down the SHIFT button.

2. You will log out of the system, and the LCD display will return to the login standby display.

```
ID:
Unit:01
```

■ ID Display Function

You can check the following on the LCD. (Refer to p. 59 for how to display.)
- Operator ID
- Controller ID
- System version

Monitor Selection and Camera Selection

After the login procedure, the following operations are available to control the system.
The operation begins with monitor selection. Then, the image of selected camera appears on the active monitor.

■ Monitor Selection

1. Select the desired monitor number by pressing the numeric buttons. The entered number will appear on the LCD.

```
MON   123          CAM
      Unit:01
```

2. Press the MON (ESC) button.
   When the selected monitor number is correct, <" is displayed.

```
MON                CAM
0123<Unit:01
```

Note:
- To select the next or previous monitor number, press the + or – button.

■ Camera Selection

1. Select the desired camera number by pressing the numeric buttons. The entered number will appear on the LCD.

```
MON 512        CAM
0123<Unit:01
```

2. Press the CAM (SET) button.
   When the selected camera number is correct, >" is displayed.

```
MON                CAM
0123 Unit:01   >00512
```

Note:
- To select the next or previous camera number, press the + or – button.
- In case of global camera numbering method, the LCD shows a camera number up to 7 digits as shown below.

```
MON                    CAM
0123 Unit:01>1234567
```

- In case of global camera numbering method, when a local operator press + or – button, the foreign domain's camera will be skipped.

■ Monitor Lock

Monitor lock is the function to retain other operators' control of a monitor even after that operator has selected another monitor.

Note:
- This function will prevent operators with a lower priority from gaining control of a monitor. However, operators with a higher priority can gain the control of monitor.

1. Select a desired monitor. (Refer to Monitor Selection.)

2. Press the MON LOCK/LOGOUT button. The monitor lock mode is activated, the monitor number with "L" sign is displayed on the active monitor, and "L" will appear beside "MON" on the LCD.

```
LMON                   CAM
0123 Unit:01    00512
```

Note:
- Every time you press the MON LOCK/LOGOUT button, the monitor lock mode will be activated or deactivated.

Display Setting for Controller

■ Adjustment of LCD Display and Buzzer

You can perform the settings of LCD brightness, LCD contrast, alarm buzzer, or button buzzer.
(Refer to WV-CU950 Operating Instructions for how to adjust.)

Camera Site Accessories Control

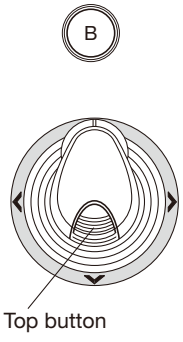
■ Lens Control

Note:
- Check that a specified lens, with motorized zoom/ focus functions, is mounted on the camera, and the lens selection (DC/VIDEO) on the camera is set to DC.
- Available functions differ depending on cameras. Refer to the Operating Instructions of camera.

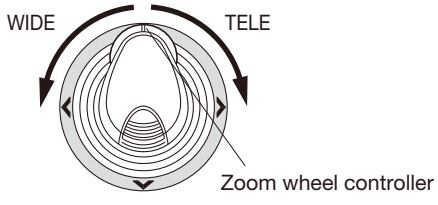
1. Select the desired monitor and camera. (Refer to p. 39 Monitor Selection and Camera Selection.)

2. Press the FOCUS FAR or NEAR button while watching the monitor. The lens focus is adjusted to obtain a sharply focused image.

Note:
- Pressing the B button or top button of 3D joystick unit can also set the lens focus automatically.



3. To adjust the lens zoom, move the zoom wheel controller to the right (TELE) or left (WIDE).



4. Press the IRIS OPEN or CLOSE buttons to open/ close the lens iris. The lens iris is adjusted by these buttons to obtain the proper image exposure.

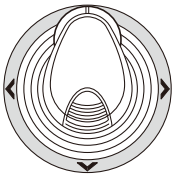
Note:
- To return the lens iris to the factory default status, press the A button of 3D joystick unit.

■ Pan/Tilt Control

● Manual Operation

1. Select the desired monitor and camera. (Refer to p. 39 Monitor Selection and Camera Selection.)

2. Move the 3D joystick to move the pan/tilt head towards the desired direction.



Note:
- If you move the 3D joystick widely, you can pan and tilt the camera faster.
- Panning/tilting speed differs depending on cameras.

● Auto Panning

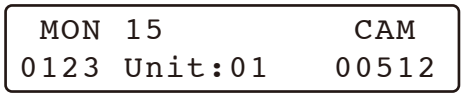
Refer to p. 54 Auto Mode for how to operate.

● Program Preset Position

1. Select the desired monitor and camera. (Refer to p. 39 Monitor Selection and Camera Selection.)

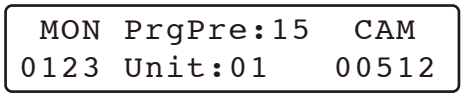
2. To move the camera to the position to be preset, move the 3D joystick and press the lens control buttons.

3. To select the desired preset position number, press the numeric buttons.



Note:
- When you have selected a wrong number, press the CLEAR button to clear the numeric input.

4. Press the PRESET/PGM PRESET button while holding down the SHIFT button. The preset position will be saved.

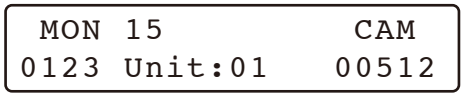


Note:
- If the entered position number has stored the previous preset position, it will be overwritten by the new one.

● Call Preset Position

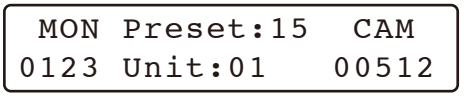
1. Select the desired monitor and camera. (Refer to p. 39 Monitor Selection and Camera Selection.)

2. To select the desired preset position number, press the numeric buttons.



Note:
- When you have selected a wrong number, press the CLEAR button to clear the numeric input.

3. Press the PRESET/PGM PRESET button. The camera will move to the preset position, and the image of selected preset position will be displayed on the active monitor.



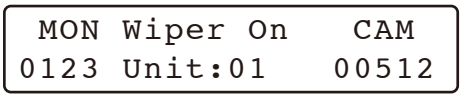
Note:
- To call preset positions, you must set preset position numbers for the camera in advance.

■ Wiper Control

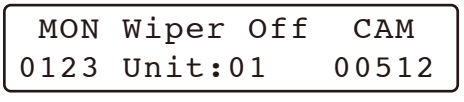
The following procedure is available when a selected camera (housing) is equipped with a wiper.

1. Select the desired monitor and camera. (Refer to p. 39 Monitor Selection and Camera Selection.)

2. Keep pressing the WIPER button.
The wiper will be activated while this button is being pressed.



Note:
- When the WIPER button is released, the LCD display will become as follows.



■ Defroster Control

The following procedure is available when a selected camera (housing) is equipped with a defroster.

1. Select the desired monitor and camera. (Refer to p. 39 Monitor Selection and Camera Selection.)

2. Pressing the DEF ON/OFF button.
   The defroster will be activated.

```
 MON Def On      CAM
0123 Unit:01   00512
```

3. To deactivate the defroster, press the DEF ON/OFF button while holding down the SHIFT button.

```
 MON Def Off     CAM
0123 Unit:01   00512
```

Note:

- The defroster will be automatically deactivated when the temperature reaches the specified degrees.

■ Auxiliary Control

You can control one or two auxiliary control devices. The following procedure is available when an auxiliary control device, such as Receiver WV-RC150, is connected to a system unit.

● Operating Procedure

1. Select the desired monitor and camera. (Refer to p. 39 Monitor Selection and Camera Selection.)

2. Press the AUX 1 ON/OFF or AUX 2 ON/OFF button.
   The auxiliary control device, associated by the installation wiring, will be activated.

```
 MON Aux1 On     CAM
0123 Unit:01   00512
```

```
 MON Aux2 On     CAM
0123 Unit:01   00512
```

3. To quit the auxiliary control, press the AUX 1 ON/OFF or AUX 2 ON/OFF button while holding down the SHIFT button.

```
 MON Aux1 Off    CAM
0123 Unit:01   00512
```

```
 MON Aux2 Off    CAM
0123 Unit:01   00512
```

Camera Function Control

■ Camera Function (Shortcut Function)

The following function is available only when specified cameras with the camera function feature are used. This function enables executing camera functions via a shortcut.

Note:
- This feature is available in only WJ-SX650 or WJ-SX850 because of OSD limitation.

1. Select the desired monitor and camera. (Refer to p. 39 Monitor Selection and Camera Selection.)

2. Enter the desired camera function number by pressing the numeric buttons.

```
 MON 75           CAM
0123 Unit:01    00512
```

Note:
- When you select a wrong number, press the CLEAR button to clear the numeric input.

3. Press the CAM FUNC/SYS FUNC button. "CamF:nnn" will appear on the LCD.

```
 MON CamF:75      CAM
0123 Unit:01    00512
```

Note:
- Refer to Operating Instructions of camera for details on available shortcuts.

■ Other Camera Functions

The following functions are available.
- Camera setup (p. 54)
- Auto mode (p. 54)
- BW mode (p. 54)
- Patrol learn (p. 55)

Running Sequence

■ Tour Sequence

The following functions are available if a Tour Sequence has been previously configured through the admin console. Any Tour Sequence can be assigned to any monitors.

1. Select the desired monitor. (Refer to p. 39 Monitor Selection.)

2. To select the desired Tour Sequence number, press the numeric buttons.

```
 MON 1              CAM
0123 Unit:01    00512
```

Note:
- When you have selected a wrong number, press the CLEAR button to clear the numeric input.

3. Press the TOUR SEQ/GROUP SEQ button. The Tour Sequence will run in forward direction on the active monitor, and the Tour Sequence number with "R" (Running) sign is displayed on the active monitor.

```
 MON A001T0001R CAM
0123 Unit:01    00512
```

Note:
- The messages on the LCD indicate the following.

Annn: Area No.
Tnnnn: Tour Sequence No.
R: Running

4. To pause the sequence, press the SEQ PAUSE/SEQ STOP button.
The "P" (Pausing) sign will be displayed beside the Tour Sequence number area on the active monitor, and "P" will appear beside the Tour Sequence number.

```
 MON A001T0001P CAM
0123 Unit:01    00512
```

Note:
- To switch to the next sequence step, press the + button during sequence pause.
- To switch to the previous sequence step, press the – button during sequence pause.
- To resume the sequence, press the TOUR SEQ/GROUP SEQ again.

5. To return to spot monitoring, press the SEQ PAUSE/SEQ STOP button while holding down the SHIFT button.

Note:
- You can also return to spot monitoring by selecting a camera.
- In case of global camera numbering method, the LCD shows a tour sequence number as shown below.
In this method, the number includes just tour sequence number and not includes the area number.

```
 MON T1234R      CAM
0123 Unit:01 1234567
```

■ Group Sequence

The following function is available only if a Group Sequence has been previously established through the admin console. A Group Sequence determines the assignment of monitors and cameras.

1. Press the numeric buttons to select a desired Group Sequence number.

```
 MON 1              CAM
0123 Unit:01    00512
```

Note:
- When you have selected a wrong number, press the CLEAR button to clear the numeric input.

2. Press the TOUR SEQ/GROUP SEQ button while holding down the SHIFT button. The Group Sequence will run in forward direction on the assigned monitors, and the Group Sequence number with "R" (Running) sign is displayed on each monitor.

```
 MON A001G0001R CAM
0123 Unit:01   00512
```

Note:
- The messages on the LCD indicate the following.
  Annn: Area No.
  Gnnnn: Group Sequence No.
  R: Running
- When you select another monitor and starts a group sequence, the Group Sequence number will not be displayed on the LCD.

3. To pause the sequence, select one of the monitors that are being run on the selected group sequence. Then press the SEQ PAUSE/SEQ STOP button. The "P" (Pausing) sign will be displayed beside the Group Sequence number area on the active monitor.

```
 MON A001G0001P CAM
0123 Unit:01   00512
```

Note:
- To switch to the next sequence step, press the + button during sequence pause.
- To switch to the previous sequence step, press the – button during sequence pause.

4. To return to spot monitoring, select one of the monitors that are being run on the selected group sequence. Then, press the SEQ PAUSE/SEQ STOP button while holding down the SHIFT button.

Note:
- You can also return to spot monitoring by selecting a camera.
- Group sequences should contain group presets with the same group of monitors.
- If two or more group sequences are assigned to the same monitor, only one group sequence can run at a time.
- Group sequences do not support the switchover and restore functions.

■ Call Group Preset

Refer to p. 55 Menu Function Details for how to operate.

Monitor Display Control

Number of characters displayed on the monitor screen differs depending on systems.

- **GX System (NTSC model only), System850:** 40 x 16 characters
- **WJ-SX650 512 x 64 Full Matrix System:** 38 x 14 characters

The following are examples of WJ-SX650 512 x 64 Full Matrix System monitor display.

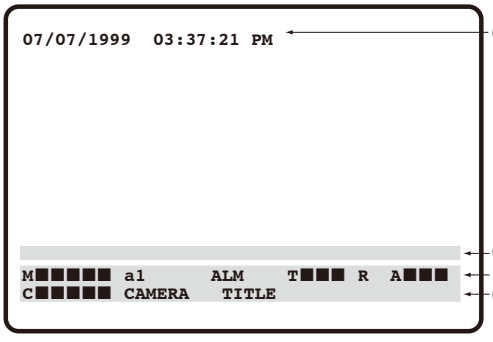
■ On-Screen Display Control

The procedure described below lets you determine the display, such as camera title, clock and status, on and off on the active monitor screen.

1. Select the desired monitor. (Refer to p. 39 Monitor Selection.)

2. Press the OSD button. The OSD items (camera ID, monitor status, and general status) will be hidden from the monitor.

```
 MON OSDAll Off CAM
0123 Unit:01   00512
```



OSD Example

Cxxxxx: camera number
Mxxxx: monitor number
axx: area number
Sxx: controller number with super user privilege operator
Kxx: controller number with normal user privilege operator
Txxx: Tour Sequence number
R: Run
P: Pause
ALM: alarm occurring
Axx: alarm number
-0 to -9 alarm action number
∗: alarms behind

▶ Playback on WJ-GXD400

❚❚ Pause on WJ-GXD400

▶▶2 ▶▶3 ▶▶4 ▶▶5 ▶▶6 ▶▶7 FWD on WJ-GXD400

◀◀2 ◀◀3 ◀◀4 ◀◀5 ◀◀6 ◀◀7 REW on WJ-GXD400

■ Record end

Note:

- Every time you press the OSD button, the OSD items will be displayed or hidden. When the OSD items are displayed, the LCD display will become as follows.

```
 MON OSDAll On  CAM
0123 Unit:01   00512
```

- You cannot display or hide the clock (time and date) by pressing the OSD button. Refer to p. 55 OSD Control.
- To display or hide each OSD item individually, refer to p. 55 OSD Control.
- Only WJ-SX650 and WJ-SX850 switch node support for control the clock and general status.
- When the playback continued at ▶▶5 / ◀◀5 (rotated the shuttle ring to the end) for 5 seconds, the playback speed indicator will change to ▶▶6 / ◀◀6. When the playback continued at ▶▶6 / ◀◀6 for 5 seconds, the playback speed indicator will change to ▶▶7 / ◀◀7.

■ Alarm History Table

Refer to p. 51 Alarm History Table.

Note:

- Only WJ-SX650 or WJ-SX850 switch node

■ Alarm Status Table

Refer to p. 56 Alarm Status Table.

Note:
- Only WJ-SX650 or WJ-SX850 switch node

■ Video Loss Status Table

Refer to p. 57 Video Loss Status Table.

Note:
- Only WJ-SX650 or WJ-SX850 switch node

■ System Status Table

Refer to p. 57 System Status Table.

Note:
- Only WJ-SX650 or WJ-SX850 switch node

■ Video Loss History Table

Refer to p. 58 Video Loss History Table.

Note:
- Only WJ-SX650 or WJ-SX850 switch node

■ Multi-Screen Segment Control

The CU950 can switch three type of multi-screen segment for WJ-GXD400.

1. Select the desired monitor.

2. Enter the desired segment number (1, 3 (left large), or 6).

Note:
- WV-ASC970 does not support the right large multi-screen.

3. Press and holding SHIFT button and press MULTI SCREEN button.

Alarm Control

■ Alarm Selection

To control alarm behaviors, you need to select a desired alarm number.

1. Select a desired alarm number by pressing the numeric buttons.

```
 MON 1            CAM
0123 Unit:01    00512
```

2. Press the ALARM/ALM SUSPEND button.
   The current status of selected alarm will be displayed on the LCD.

```
 MON Alarm00001 CAM
0123  Armed    00512
```

   Armed: The system is armed for alarm response.
   Active: Alarm has been triggered and activated assigned alarm response.
   Ack: Alarm is acknowledged and an operator can control the alarm action.
   Reset: Activated alarm is reset, but the alarm device is still active.
   Disarm: The system is disarmed for alarm response.
   Clear: Auto arming is not set in the admin console.

3. To select the next alarm number, press the + button.
   To select the previous alarm number, press the – button.

■ Alarm Arming Control

1. Select a desired alarm. (Refer to Alarm Selection.)

2. Every time you press the ALARM/ALM SUSPEND button, the selected alarm will be armed or disarmed. When an alarm is disarmed, the LCD display will become as follows.

```
 MON Alarm00001 CAM
0123  Disarm   00512
```

3. To exit the alarm mode, press the CLEAR button. The LCD display will become as follows.

```
 MON Alarm Exit CAM
0123 Unit:01   00512
```

To arm or disarm all alarms
Every time you press the ALARM/ALM SUSPEND button while holding down the SHIFT button, all alarms will be armed or disarmed.

```
 MON             CAM
0123 ALL Arm   00512
```

```
 MON             CAM
0123 ALLDisarm 00512
```

Note:
- To arm or disarm an alarm, activate Allow Disarm for the alarm. (Refer to the Admin Console User's Guide for details.)

■ To Operate Alarm-related Camera (ACK)

You can operate the camera associated with the alarm action as follows:

1. Perform Step 1 and 2 of Alarm Selection.

2. Enter a desired alarm action number by pressing the numeric buttons.

Note:
- If you skip this step, Alarm Action #0 will be specified.

```
 MON 9            CAM
0123  Active    00512
```

3. Press the ACK button.
   "Ack:n" will appear on the LCD.

```
 MON Alarm00001  CAM
0123 Ack:9      00512
```

4. Control the cameras with the system controller. (Refer to p. 41 Camera Site Accessories Control.)

Note:
- To select another alarm, press the ALARM/ALM SUSPEND button. The ACK status will be canceled (cancelled). Then, enter the alarm action number by pressing the numeric buttons, and press the ACK button again.

■ To Cancel Alarms

1. Perform Step 1 to 2 of p. 49 Alarm Selection.

2. Press the ALM RESET/ALM ALL RESET button to reset the alarm. "Reset" will be displayed on the LCD.

```
 MON Alarm00001 CAM
0123  Reset    00512
```

Note:
- To reset all the alarms at a time, press the ALM RESET/ALM ALL RESET button while holding down the SHIFT button.

```
 MON Alarm00001 CAM
0123 ALL Reset 00512
```

- After the alarm is deactivated, "Armed" or "Cleared" will be displayed on the LCD.

```
 MON Alarm00001 CAM
0123  Armed    00512
```

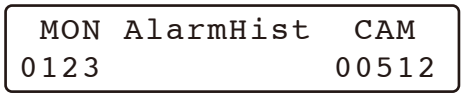
```
 MON Alarm00001 CAM
0123  Cleared  00512
```

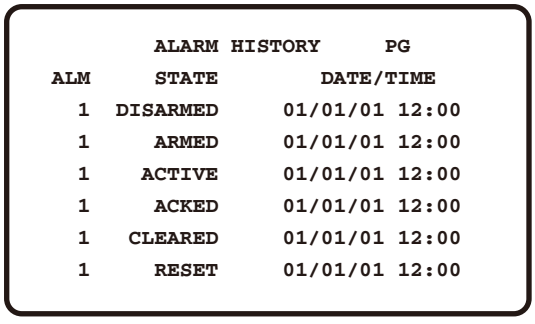
■ Alarm History Table

There are 1000 alarm records stored in chronological order in 125 pages of table.

1. Select a desired monitor. (Refer to p. 39 Monitor Selection.)

2. Press the ALM RECALL button. "AlarmHist" will appear on the LCD, and the ALARM HISTORY table will be displayed on the active monitor.





ALM: Logical alarm number
STATE: Indicates alarm state changes.
- **ARMED:** The system is armed for alarm response.
- **ACTIVE:** Alarm has been triggered and activated assigned alarm response.
- **ACKED:** Alarm is acknowledged and an operator can control the alarm action.
- **RESET:** Activated alarm is reset, but the alarm device is still active.
- **DISARMED:** The system is disarmed for alarm response.
- **CLEARED:** Auto arming is not set in the admin console.

DATE/TIME: Date and time when alarm state changes.

3. To display the next page, press the + button.
   To display the previous page, press the – button.

Note:
- To display the first page of table, press the + button while holding down the SHIFT button.
- To display the last page of table, press the – button while holding down the SHIFT button.
- Every time you press the button 0 while holding down the MON (ESC) button, the monitor background will change between camera images and black picture.

4. To exit the ALARM HISTORY table, press the CLEAR button while holding down the MON (ESC) button.

Note:
- This feature is available in only WJ-SX650 or WJ-SX850 because of OSD limitation.

Recorder Control

■ Recorder Selection

You can select a recorder by performing either of the following.

- Recorder auto selection
- Recorder manual selection

Note:

- When selecting HD616/716 series and an error window shows up, press the MENU button, then press On button and then press Off button in order to close the window.

● Recorder Auto Selection

1. Select a camera whose picture you wish to play back. (Refer to p. 39 Camera Selection.)

2. Press the PLAY/PAUSE button.
   The recorder connected to selected camera will automatically selected, and playback will start.

3. Control the recorder.

Note:

- When you press the STOP button, the monitor display is changed to the live images.

4. To resume normal camera selection, select a camera while live images are being displayed on the monitor.

```
 MON                DVR
0123 Unit:01   >00512
```

● Recorder Manual Selection

1. Enter a desired recorder number by pressing the numeric buttons.

2. Press the RECORDER/UNIT button.

```
 MON                DVR
0123 Unit:01   >00512
```

3. Control the recorder.

4. To resume normal camera selection, select a camera while live images are being displayed on the monitor.

Note:

- WV-ASC970 does not support the manual selection feature for network disk recorder.

■ Time & Date Search Playback

You can search playback images by entering a desired recording date and time.

Note:

- To cancel the entry, press the MON (ESC) or EXIT button. The LCD display will return to the normal status.

1. Press the SEARCH/T & D SEARCH button while holding down the SHIFT button. The time-and-date entry form will appear on the LCD.

```
Mmm/DD/YYYY HH:MM
Mar/17/2004 12:00 AM
```

2. Move the cursor to a position to be edited by performing either of the following.
- Move the 3D joystick controller to the right or left.
- Rotate the shuttle ring clockwise or counterclockwise.

```
Mmm/DD/YYYY HH:MM
Mar/16/2004 01:32 PM
```

3. Enter the desired date and time by performing either of the following.
- Rotate the JogDial clockwise or counterclockwise.
- Press the + or – button.

4. Press the PLAY/PAUSE button. The image on the specified date and time will be played back on the active monitor.
   After the image has been played back, the LCD will return to the default status.

Menu Function Descriptions

■ Menu Functions

No.	Function
001	Camera Setup
002	Auto Mode
003	BW Mode
004	Patrol Control
005	Group Preset
006	OSD Control
007	Digital Output
008	Alarm Status
009	Video Loss Status
010	System Status
011	Video Loss History
012	Area Change
013	Operator ID
014	Controller ID
015	System Version

■ To Recall Menu Functions

1. Press the MENU button. "CamMenu" menu will appear on the LCD.

```
CamMenu:          001
  On ▶Off Rst  A.Rst
```

2. Press the MENU button repeatedly until a desired menu appears. (Refer to pages 54 to 59.)

Note:
- When you press the MENU button repeatedly while holding down the SHIFT button, each menu will appear in the reverse order.
- You can also select the menu by rotating the JogDial clockwise or counterclockwise.

3. Perform the operations to activate the selected function. The operating procedure differs depending on each function. (Refer to pages 54 to 59.)

4. To exit the menu, press the EXIT or MON (ESC) button. The LCD display will return to the default status.

Menu Function Details

■ Camera Setup

Note:
- The following function requires the use of cameras supporting this function.
- The details on the setup menu differ depending on camera models. Refer to WV-CU950/650 Operating Instructions and the Operating Instructions of camera for available controls on the camera setup menu.

1. Select a desired monitor. (Refer to p. 39 Monitor Selection.)

2. Display "CamMenu" menu. (Refer to Step 1 and 2 of p. 53 To Recall Menu Functions.)

```
CamMenu:          001
  On ▶Off Rst  A.Rst
```

3. Select a desired function by pressing one of the F1 to F4 buttons.

   Available buttons and functions
   F1: On
   Opens the setup menu of selected camera.
   F2: Off
   Closes the setup menu of selected camera.
   F3: Rst
   - Displays the special menu.
   - To restore the default camera position, move the cursor to REFRESH on the camera setup menu by moving the 3D joystick. Then, press this button.

   F4: A.Rst
   To reset all the camera settings to the factory default, move the cursor to CAMERA RESET on the camera setup menu by moving the 3D joystick. Then, press this button.

Note:
- Depending on the camera model, "CAMERA RESET" is not displayed on the camera setup menu. In this case, the F4 button is unavailable.
- This function is available in only for WJ-SX650 or WJ-SX850.

■ Auto Mode

1. Select a desired monitor and camera. (Refer to p. 39 Monitor Selection and Camera Selection.)

2. Display "Auto Mod" menu. (Refer to Step 1 and 2 of p. 53 To Recall Menu Functions.)

```
AutoMod:          002
 Seq Sort Pan Patrol
```

3. Select a desired function by pressing one of the F1 to F4 buttons.

   Available buttons and functions
   F1: Seq
   Activates the sequence mode.
   F2: Sort
   Activates the sort mode.
   F3: Pan
   Activates the auto pan mode.
   F4: Patrol
   Activates the patrol mode.

■ BW Mode

1. Select a desired monitor and camera. (Refer to p. 39 Monitor Selection and Camera Selection.)

2. Display "BW Mode" menu. (Refer to Step 1 and 2 of p. 53 To Recall Menu Functions.)

```
BW Mode:          003
  On Off Auto1 Auto2
```

3. Select a desired function by pressing one of the F1 to F4 buttons.

   Available buttons and functions
   F1: On
   Changes the camera image from color (colour) to black and white.
   F2: Off
   Changes the camera image from black and white to color (colour).

F3: Auto1
Activates Auto 1 mode. (The camera selects black and white mode if the picture is dark, or color (colour) mode if the picture is bright enough.)
F4: Auto2
Activates Auto 2 mode. (The camera detects the light source type to prevent malfunction. This setting is applicable when using a near-infrared light source in a dark place.)

■ Patrol Learn

1. Select a desired monitor and camera. (Refer to p. 39 Monitor Selection and Camera Selection.)

2. Display "Patrol" menu. (Refer to Step 1 and 2 of p. 53 To Recall Menu Functions.)

3. Press the F1 (Start) button.
   The patrol learn setup will start.

4. Perform desired camera operations by moving the 3D joystick or zoom wheel controller, etc.
   The following controls are available for patrol learn.
- Panning/Tilting (3D joystick)
- Iris control (IRIS OPEN/CLOSE buttons)
- Focus control (FOCUS FAR/NEAR buttons)
- Zoom control (Zoom wheel controller)

Note:
- The available total time of patrol learn differs depending on cameras. When the time is over, the patrol learn setup will automatically stop.

5. To quit the patrol learn setup, press the F2 (Stop) button.

■ Group Preset

Note:
- This function is available only when Group Preset setting has been established through the admin console. (Refer to the Admin Console User's Guide.)

A Group Preset determines which monitor is to be assigned to which camera. Therefore, monitor selection is not required.

1. Display "GrpPre" menu. (Refer to Step 1 and 2 of p. 53 To Recall Menu Functions.)

2. Select a desired Group Preset number by pressing the numeric buttons.

3. Press the F1 (Set) or CAM(SET) button to activate a selected Group Preset function.
   The preset position of assigned cameras will be displayed simultaneously on the assigned monitors.

■ OSD Control

1. Select a desired monitor. (Refer to p. 39 Monitor Selection.)

2. Display "OSD" menu. (Refer to Step 1 and 2 of p. 53 To Recall Menu Functions.)

3. Select a desired function by pressing one of the F1 to F4 buttons.

Available buttons and functions
F1: T&D
Displays or hides the clock (time and date) display.
F2: Cam
Displays or hides the camera ID (camera number and title) display.

F3: Gen
Displays or hides the general status display.
F4: Mon
Displays or hides the monitor status display.

Note:
- Refer to the illustrations in p. 47 for each OSD item.
- T & D and Gen are available in only WJ-SX650 or WJ-SX850 switch node.

■ Digital Output

Note:
- This function is available only when Digital Output setting has been established through the admin console. (Refer to the Admin Console User's Guide.)

1. Display "DigiOut" menu. (Refer to Step 1 of p. 53 To Recall Menu Functions.)

2. Select a Digital Output number by pressing the numeric buttons.

3. Press the F1 (Set) or CAM(SET) button. A one-shot pulse will be produced, and an assigned event will be activated.

Note:
- Digital Output does not support the restore function.

■ Alarm Status Table

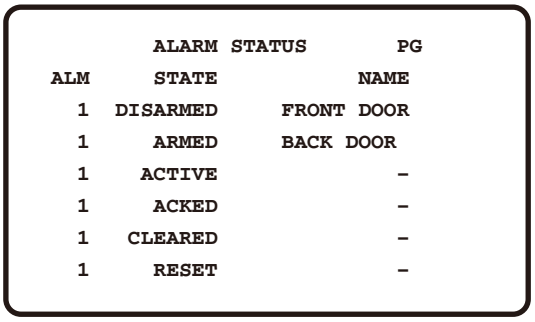
The table shows the alarm statuses.

1. Select a desired monitor. (Refer to p. 39 Monitor Selection.)

2. Display "AlmStat" menu. (Refer to Step 1 and 2 of p. 53 To Recall Menu Functions.)

3. Select a desired function by pressing one of the F1 to F3 buttons.

Available buttons and functions
F1: On
Opens the ALARM STATUS table.
F2: Off
Closes the ALARM STATUS table.
F3: Blk
Changes the monitor background between camera images and black picture.



NAME: Alarm text
(Refer to p. 51 for other columns on the table.)

4. To display the next page, press the + button.
To display the previous page, press the – button.

Note:
- To display the first page of table, press the + button while holding down the SHIFT button.
- To display the last page of table, press the – button while holding down the SHIFT button.

5. To exit the ALARM STATUS table, perform one of the following.
- Select a camera. (Refer to p. 39 Camera Selection.)
- Press F2, then press the MON(ESC) button.
- Press F2, then press the EXIT button.

Note:
- This feature is available in only WJ-SX650 or WJ-SX850 because of OSD limitation.

■ Video Loss Status Table

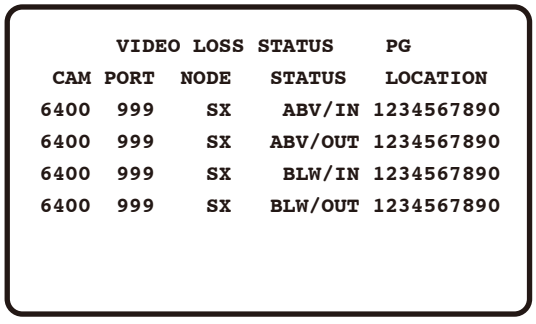
The table shows the video loss detection statuses.

1. Select a desired monitor. (Refer to p. 39 Monitor Selection.)

2. Display "VL Stat" menu. (Refer to Step 1 and 2 of p. 53 To Recall Menu Functions.)

3. Select a desired function by pressing one of the F1 to F3 buttons.

Available buttons and functions
F1: On
Opens the VIDEO LOSS STATUS table.
F2: Off
Closes the VIDEO LOSS STATUS table.
F3: Blk
Changes the monitor background between camera images and black picture.


VIDEO LOSS STATUS PG
CAM PORT NODE STATUS LOCATION
6400 999 SX ABV/IN 1234567890
6400 999 SX ABV/OUT 1234567890
6400 999 SX BLW/IN 1234567890
6400 999 SX BLW/OUT 1234567890

CAM: Logical camera number
PORT#: Video input port number
NODE: Video switch node type
STATUS:
- **ABV/IN:** Video level is above normal and in sync.
- **BLW/IN:** Video level is below normal and in sync.
- **ABV/OUT:** Video level is above normal and out of sync.
- **BLW/OUT:** Video level is below normal and out of sync.

LOCATION: Logical cage number that the port belongs to.

4. To display the next page, press the + button.
To display the previous page, press the – button.

Note:
- To display the first page of table, press the + button while holding down the SHIFT button.
- To display the last page of table, press the – button while holding down the SHIFT button.

5. To exit the VIDEO LOSS table, perform either of the following.
- Select a camera. (Refer to p. 39 Camera Selection.)
- Press F2, then press the MON(ESC) button.
- Press F2, then press the EXIT button.

Note:
- This feature is available in only WJ-SX650 or WJ-SX850 because of OSD limitation.

■ System Status Table

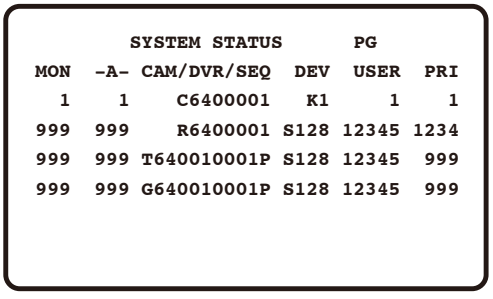
The table shows the system status in real time.

1. Select a desired monitor. (Refer to p. 39 Monitor Selection.)

2. Display "SysStat" menu. (Refer to Step 1 and 2 of p. 53 To Recall Menu Functions.)

3. Select a desired function by pressing one of the F1 to F3 buttons.

Available buttons and functions
F1: On
Opens the SYSTEM STATUS table.
F2: Off
Closes the SYSTEM STATUS table.
F3: Blk
Changes the monitor background between camera images and black picture.



MON: Monitor number
-A-: Area number
CAM/DVR/SEQ:
<Example>
C6400001: Unit 64, Camera 1
R6400001: Unit 64, Recorder 1
T640010001P: Unit 64, Area 1, Tour Sequence 1 pause
G640010001P: Unit 64, Area 1, Group Sequence 1 pause
DEV: Device Name
K: System controller number with normal user operator.
S: System controller number with super user operator.
ALM: Alarm
EVT: Timer event
USER: User ID
Note: Alarm USRID consists of alarm number and alarm action number.
E.g. "ALM20" indicates alarm #2 and its action #0.

PRI: User priority

4. To display the next page, press the + button.
To display the previous page, press the – button.

Note:
- To display the first page of table, press the + button while holding down the SHIFT button.
- To display the last page of table, press the – button while holding down the SHIFT button.
- If the DVR is a network disk recorder, R6400001 indicates the camera number related to the recorder.
- The PRI field indicates "–" when the priority is set to "0".
- In case of global camera numbering method, the camera number is just up to 7 digits number. And also the tour sequence number is up to 4 digits number. i.e. C1234567: Camera 1234567, T501P: Tour Sequence 501 Puase.
- While the WV-ASM970 performs the synchronous playback, the CAM/DVR/SEQ field displays previous status for dedicated monitors.

5. To exit the SYSTEM STATUS table, perform either of the following.
- Select a camera. (Refer to p. 39 Camera Selection.)
- Press the MON(ESC) button.
- Press the EXIT button.

Note:
- This feature is available in only WJ-SX650 or WJ-SX850 because of OSD limitation.

■ Video Loss History Table

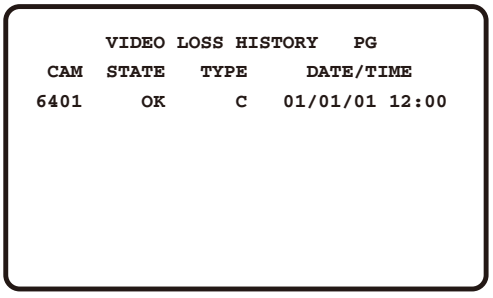
There are 100 video loss detection records stored in chronological order in 10 pages of table.

1. Select a desired monitor. (Refer to p. 39 Monitor Selection.)

2. Display "VL Hist" menu. (Refer to Step 1 and 2 of p. 53 To Recall Menu Functions.)

3. Select a desired function by pressing one of the F1 to F3 buttons.

Available buttons and functions
F1: On
Opens the VIDEO LOSS HISTORY table.
F2: Off
Closes the VIDEO LOSS HISTORY table.
F3: Blk
Changes the monitor background between camera images and black picture.



CAM: Logical camera number that is connected to the system.

STATE: Indicates video loss changes.
OK: Video loss is recovered.
LS: Video level is below normal and in sync.
VL: Video level is below normal and out of sync.
HL: Video level is above normal and out of sync.
TYPE: Place where the video loss occurs.
S: Video crosspoint input (Not supported)
C: Camera control input
DATE/TIME: Date and time when the video loss state changes.

4. To display the next page, press the + button.
   To display the previous page, press the – button.

Note:
- To display the first page of table, press the + button while holding down the SHIFT button.
- To display the last page of table, press the – button while holding down the SHIFT button.

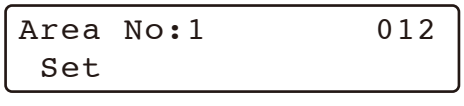
5. To exit the VIDEO LOSS HISTORY table, perform either of the following.
- Select a camera. (Refer to p. 39 Camera Selection.)
- Press the MON(ESC) button.
- Press the EXIT button.

Note:
- This feature is available in only WJ-SX650 or WJ-SX850 because of OSD limitation.

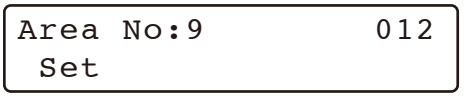
■ Area Change

Note:
- The following function is available only if the assignments of monitor surveillance areas has been established through admin console. (Refer to the Admin Console User's Guide.)

1. Display "Area No" menu. (Refer to Step 1 and 2 of p. 53 To Recall Menu Functions.)



2. Select an area number by pressing the numeric buttons.



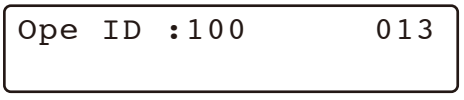
Note:
- If you have selected an area not assigned through the admin console, operations will become unavailable. In this case, log out, and then log into the system again. (Refer to p. 38 Login and Logout.)

3. Press the F1 button. The area will be changed.

■ Operator ID

You can check your operator ID as follows.

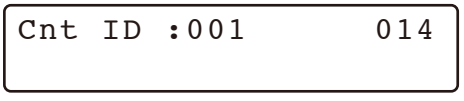
Display "Ope ID" menu. (Refer to Step 1 and 2 of p. 53 To Recall Menu Functions.)
Your operator ID will be displayed on the LCD.



■ Controller ID

You can check your System Controller ID as follows.

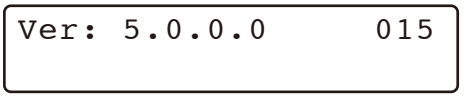
Display "Cnt ID" menu. (Refer to Step 1 and 2 of p. 53 To Recall Menu Functions.)
Your System Controller ID will be displayed on the LCD.



■ System Version

You can check the system version of CPU as follows.

Display "Ver" menu. (Refer to Step 1 and 2 of p. 53 To Recall Menu Functions.)
The system version of CPU will be displayed on the LCD.

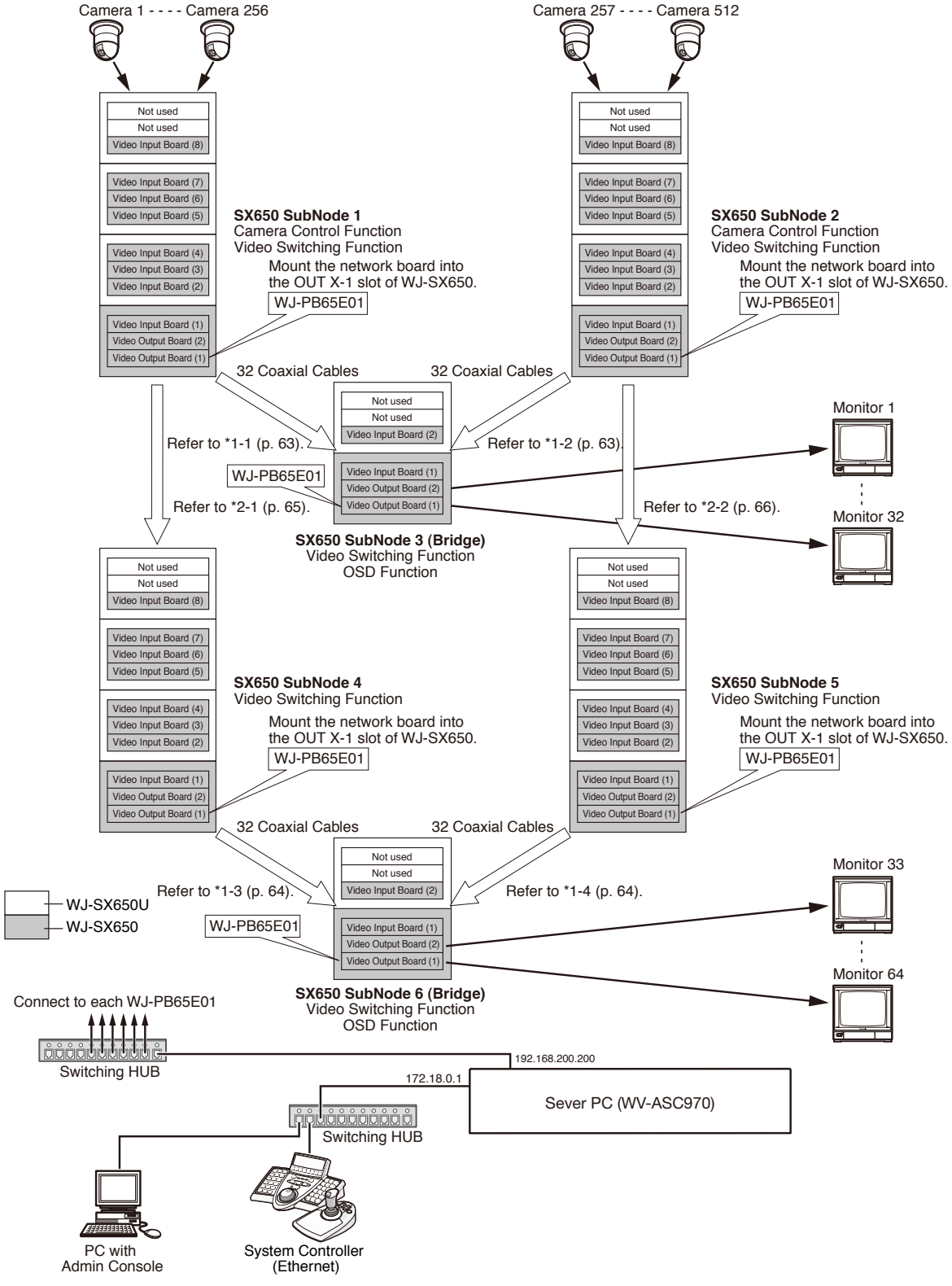


Appendix 1

WJ-SX650 512 x 64 Matrix System Configuration Example

● Overview

One WV-ASC970 Server can handle up to six SX650 SubNodes (include two SX650 Bridge nodes).
Each sub node should equip one Network Board WJ-PB65E01 to communicate with the Server through the Ethernet.

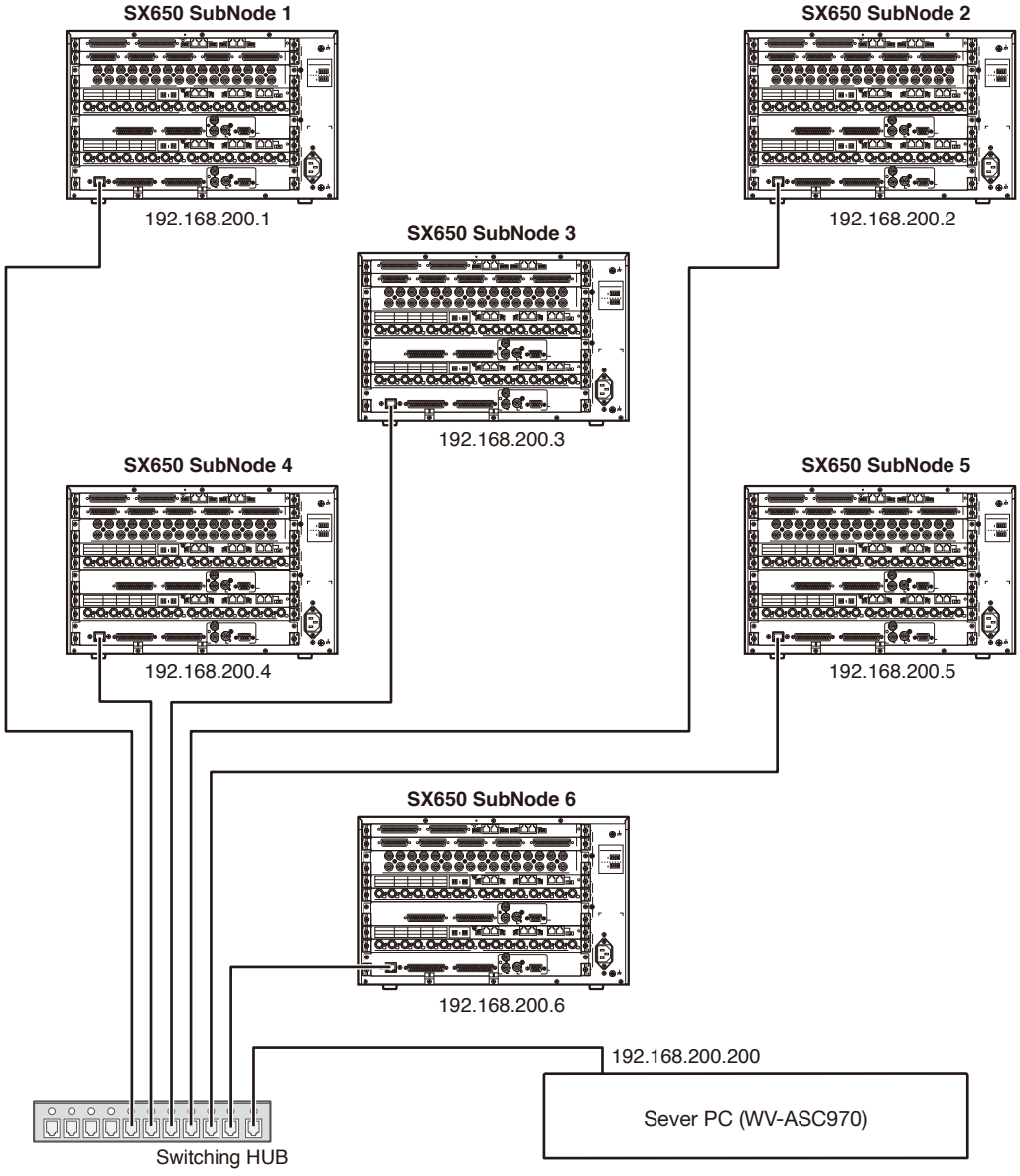


● Network Board Installation

The back panel (OUT X-1) of Video Output Board 1 should be replaced by Network Board WJ-PB65E01.

● Connect with WV-ASC970 Server

The matrix switchers connect with the WV-ASC970 Server through its Ethernet port and one or more switching hub units. This system can support up to six WJ-SX650 SubNodes. The Server assigns the IP address to each SubNode based on the admin console database.



This illustration shows the network connection only. (This is not the whole connection.)

● MODE Switch Settings

Each matrix switcher's Video Output Board 1 should be given the unique address by the MODE switch setting. This address and IP address are registered in the admin console, and the WV-ASC970 Server assigns the IP address to each matrix switcher based on the admin console database.

SX650 Output Board MODE Switch Settings (Bit Order : 1-2-3-4-5-6-7-8)	Operation Mode	Address
ON-ON-ON-ON-OFF-OFF-OFF-OFF	Main CPU Mode	Address=1
ON-ON-ON-ON-OFF-OFF-OFF-ON	Main CPU Mode	Address=2
ON-ON-ON-ON-OFF-OFF-ON-OFF	Main CPU Mode	Address=3
ON-ON-ON-ON-OFF-OFF-ON-ON	Main CPU Mode	Address=4
ON-ON-ON-ON-OFF-ON-OFF-OFF	Main CPU Mode	Address=5
ON-ON-ON-ON-OFF-ON-OFF-ON	Main CPU Mode	Address=6
ON-ON-ON-ON-OFF-ON-ON-OFF	Main CPU Mode	Address=7
ON-ON-ON-ON-OFF-ON-ON-ON	Main CPU Mode	Address=8
ON-ON-ON-ON-ON-OFF-OFF-OFF	Main CPU Mode	Address=9
ON-ON-ON-ON-ON-OFF-OFF-ON	Main CPU Mode	Address=10
ON-ON-ON-ON-ON-OFF-ON-OFF	Main CPU Mode	Address=11
ON-ON-ON-ON-ON-OFF-ON-ON	Main CPU Mode	Address=12
ON-ON-ON-ON-ON-ON-OFF-OFF	Main CPU Mode	Address=13
ON-ON-ON-ON-ON-ON-OFF-ON	Main CPU Mode	Address=14
ON-ON-ON-ON-ON-ON-ON-OFF	Reserved	–
ON-ON-ON-ON-ON-ON-ON-ON	Standard SX650 Mode	–

Note:

- In the "Main CPU Mode", the SX650 cage with network board will work as one of switch node device controlled by WV-ASC970 Server.
- The grayed (greyed) settings are reserved for future use.

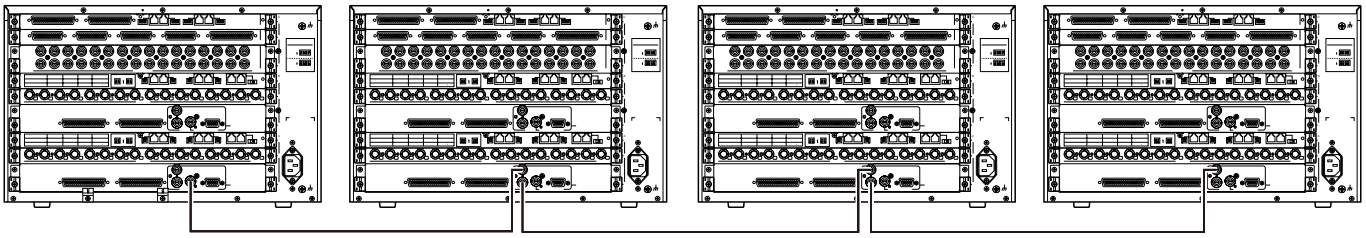
● WV-ASC970 Admin Console Setup

In order to be added to the WJ-SX650 512 x 64 Full Matrix System, a WJ-SX650 SubNode must be registered in the SX650 SubNode database. In the admin console, select Switch Nodes from Domain menu, select SX650 from the sub-menu that appears, and enter the information for the matrix switcher.

ID	I/F	IPA	BRIDGE	CONTROL	OSD	SWITCH	ALARM	Address
1	0	192.168.200.1	–	1-256	–	1-256, 1-32	–	1
2	0	192.168.200.2	–	257-512	–	257-512, 1-32	–	2
3	0	192.168.200.3	1-32	–	1-32	–	–	3
4	0	192.168.200.4	–	–	–	1-256, 33-64	–	4
5	0	192.168.200.5	–	–	–	257-512, 33-64	–	5
6	0	192.168.200.6	33-64	–	33-64	–	–	6

● Vertical Interval Synchronization

Connect the coaxial cables as shown below.



Set DIP SW4005 Bit4 to ON for each Video Output Board 1.

● Connect with Each SX650 SubNode via Coaxial Cables

***1-1 Video Connection between SubNode 1 and SubNode 3 (Bridge)**

SubNode 1		SubNode 3
Monitor Output Connectors 1 (Output Board (1))	→	Camera Input Connecters 1 (Input Board (1))
:		:
Monitor Output Connectors 16 (Output Board (1))	→	Camera Input Connecters 16 (Input Board (1))
Monitor Output Connectors 1 (Output Board (2))	→	Camera Input Connecters 17 (Input Board (1))
:		:
Monitor Output Connectors 16 (Output Board (2))	→	Camera Input Connecters 32 (Input Board (1))

***1-2 Video Connection between SubNode 2 and SubNode 3 (Bridge)**

SubNode 2		SubNode 3
Monitor Output Connectors 1 (Output Board (1))	→	Camera Input Connecters 1 (Input Board (2))
:		:
Monitor Output Connectors 16 (Output Board (1))	→	Camera Input Connecters 16 (Input Board (2))
Monitor Output Connectors 1 (Output Board (2))	→	Camera Input Connecters 17 (Input Board (2))
:		:
Monitor Output Connectors 16 (Output Board (2))	→	Camera Input Connecters 32 (Input Board (2))

Note:

- To make the video switching work as non-blocking, the all 32 outputs of SubNode 1 and SubNode 2 should be connected to SubNode 3 inputs.

***1-3 Video Connection between SubNode 4 and SubNode 6 (Bridge)**

SubNode 4		SubNode 6
Monitor Output Connectors 1 (Output Board (1))	→	Camera Input Connecters 1 (Input Board (1))
:		:
Monitor Output Connectors 16 (Output Board (1))	→	Camera Input Connecters 16 (Input Board (1))
Monitor Output Connectors 1 (Output Board (2))	→	Camera Input Connecters 17 (Input Board (1))
:		:
Monitor Output Connectors 16 (Output Board (2))	→	Camera Input Connecters 32 (Input Board (1))

***1-4 Video Connection between SubNode 5 and SubNode 6 (Bridge)**

SubNode 5		SubNode 6
Monitor Output Connectors 1 (Output Board (1))	→	Camera Input Connecters 1 (Input Board (2))
:		:
Monitor Output Connectors 16 (Output Board (1))	→	Camera Input Connecters 16 (Input Board (2))
Monitor Output Connectors 1 (Output Board (2))	→	Camera Input Connecters 17 (Input Board (2))
:		:
Monitor Output Connectors 16 (Output Board (2))	→	Camera Input Connecters 32 (Input Board (2))

Note:

- To make the video switching work as non-blocking, the all 32 outputs of SubNode 4 and SubNode 5 should be connected to SubNode 6 inputs.

***2-1 Loop-thru Connection between SubNode 1 and SubNode 4**

SubNode 1		SubNode 4
VIDEO OUT 1 (Input Board (1))	→	Camera Input Connecters 1 to 8 (Input Board (1))
VIDEO OUT 2 (Input Board (1))	→	Camera Input Connecters 9 to 16 (Input Board (1))
VIDEO OUT 3 (Input Board (1))	→	Camera Input Connecters 17 to 24 (Input Board (1))
VIDEO OUT 4 (Input Board (1))	→	Camera Input Connecters 25 to 32 (Input Board (1))
VIDEO OUT 1 (Input Board (2))	→	Camera Input Connecters 1 to 8 (Input Board (2))
VIDEO OUT 2 (Input Board (2))	→	Camera Input Connecters 9 to 16 (Input Board (2))
VIDEO OUT 3 (Input Board (2))	→	Camera Input Connecters 17 to 24 (Input Board (2))
VIDEO OUT 4 (Input Board (2))	→	Camera Input Connecters 25 to 32 (Input Board (2))
VIDEO OUT 1 (Input Board (3))	→	Camera Input Connecters 1 to 8 (Input Board (3))
VIDEO OUT 2 (Input Board (3))	→	Camera Input Connecters 9 to 16 (Input Board (3))
VIDEO OUT 3 (Input Board (3))	→	Camera Input Connecters 17 to 24 (Input Board (3))
VIDEO OUT 4 (Input Board (3))	→	Camera Input Connecters 25 to 32 (Input Board (3))
VIDEO OUT 1 (Input Board (4))	→	Camera Input Connecters 1 to 8 (Input Board (4))
VIDEO OUT 2 (Input Board (4))	→	Camera Input Connecters 9 to 16 (Input Board (4))
VIDEO OUT 3 (Input Board (4))	→	Camera Input Connecters 17 to 24 (Input Board (4))
VIDEO OUT 4 (Input Board (4))	→	Camera Input Connecters 25 to 32 (Input Board (4))
VIDEO OUT 1 (Input Board (5))	→	Camera Input Connecters 1 to 8 (Input Board (5))
VIDEO OUT 2 (Input Board (5))	→	Camera Input Connecters 9 to 16 (Input Board (5))
VIDEO OUT 3 (Input Board (5))	→	Camera Input Connecters 17 to 24 (Input Board (5))
VIDEO OUT 4 (Input Board (5))	→	Camera Input Connecters 25 to 32 (Input Board (5))
VIDEO OUT 1 (Input Board (6))	→	Camera Input Connecters 1 to 8 (Input Board (6))
VIDEO OUT 2 (Input Board (6))	→	Camera Input Connecters 9 to 16 (Input Board (6))
VIDEO OUT 3 (Input Board (6))	→	Camera Input Connecters 17 to 24 (Input Board (6))
VIDEO OUT 4 (Input Board (6))	→	Camera Input Connecters 25 to 32 (Input Board (6))
VIDEO OUT 1 (Input Board (7))	→	Camera Input Connecters 1 to 8 (Input Board (7))
VIDEO OUT 2 (Input Board (7))	→	Camera Input Connecters 9 to 16 (Input Board (7))
VIDEO OUT 3 (Input Board (7))	→	Camera Input Connecters 17 to 24 (Input Board (7))
VIDEO OUT 4 (Input Board (7))	→	Camera Input Connecters 25 to 32 (Input Board (7))
VIDEO OUT 1 (Input Board (8))	→	Camera Input Connecters 1 to 8 (Input Board (8))
VIDEO OUT 2 (Input Board (8))	→	Camera Input Connecters 9 to 16 (Input Board (8))
VIDEO OUT 3 (Input Board (8))	→	Camera Input Connecters 17 to 24 (Input Board (8))
VIDEO OUT 4 (Input Board (8))	→	Camera Input Connecters 25 to 32 (Input Board (8))

***2-2 Loop-thru Connection between SubNode 2 and SubNode 5**

SubNode 2		SubNode 5
VIDEO OUT 1 (Input Board (1))	→	Camera Input Connecters 1 to 8 (Input Board (1))
VIDEO OUT 2 (Input Board (1))	→	Camera Input Connecters 9 to 16 (Input Board (1))
VIDEO OUT 3 (Input Board (1))	→	Camera Input Connecters 17 to 24 (Input Board (1))
VIDEO OUT 4 (Input Board (1))	→	Camera Input Connecters 25 to 32 (Input Board (1))
VIDEO OUT 1 (Input Board (2))	→	Camera Input Connecters 1 to 8 (Input Board (2))
VIDEO OUT 2 (Input Board (2))	→	Camera Input Connecters 9 to 16 (Input Board (2))
VIDEO OUT 3 (Input Board (2))	→	Camera Input Connecters 17 to 24 (Input Board (2))
VIDEO OUT 4 (Input Board (2))	→	Camera Input Connecters 25 to 32 (Input Board (2))
VIDEO OUT 1 (Input Board (3))	→	Camera Input Connecters 1 to 8 (Input Board (3))
VIDEO OUT 2 (Input Board (3))	→	Camera Input Connecters 9 to 16 (Input Board (3))
VIDEO OUT 3 (Input Board (3))	→	Camera Input Connecters 17 to 24 (Input Board (3))
VIDEO OUT 4 (Input Board (3))	→	Camera Input Connecters 25 to 32 (Input Board (3))
VIDEO OUT 1 (Input Board (4))	→	Camera Input Connecters 1 to 8 (Input Board (4))
VIDEO OUT 2 (Input Board (4))	→	Camera Input Connecters 9 to 16 (Input Board (4))
VIDEO OUT 3 (Input Board (4))	→	Camera Input Connecters 17 to 24 (Input Board (4))
VIDEO OUT 4 (Input Board (4))	→	Camera Input Connecters 25 to 32 (Input Board (4))
VIDEO OUT 1 (Input Board (5))	→	Camera Input Connecters 1 to 8 (Input Board (5))
VIDEO OUT 2 (Input Board (5))	→	Camera Input Connecters 9 to 16 (Input Board (5))
VIDEO OUT 3 (Input Board (5))	→	Camera Input Connecters 17 to 24 (Input Board (5))
VIDEO OUT 4 (Input Board (5))	→	Camera Input Connecters 25 to 32 (Input Board (5))
VIDEO OUT 1 (Input Board (6))	→	Camera Input Connecters 1 to 8 (Input Board (6))
VIDEO OUT 2 (Input Board (6))	→	Camera Input Connecters 9 to 16 (Input Board (6))
VIDEO OUT 3 (Input Board (6))	→	Camera Input Connecters 17 to 24 (Input Board (6))
VIDEO OUT 4 (Input Board (6))	→	Camera Input Connecters 25 to 32 (Input Board (6))
VIDEO OUT 1 (Input Board (7))	→	Camera Input Connecters 1 to 8 (Input Board (7))
VIDEO OUT 2 (Input Board (7))	→	Camera Input Connecters 9 to 16 (Input Board (7))
VIDEO OUT 3 (Input Board (7))	→	Camera Input Connecters 17 to 24 (Input Board (7))
VIDEO OUT 4 (Input Board (7))	→	Camera Input Connecters 25 to 32 (Input Board (7))
VIDEO OUT 1 (Input Board (8))	→	Camera Input Connecters 1 to 8 (Input Board (8))
VIDEO OUT 2 (Input Board (8))	→	Camera Input Connecters 9 to 16 (Input Board (8))
VIDEO OUT 3 (Input Board (8))	→	Camera Input Connecters 17 to 24 (Input Board (8))
VIDEO OUT 4 (Input Board (8))	→	Camera Input Connecters 25 to 32 (Input Board (8))

Note:

- For the loop-thru connections, use the WJ-CA68 and regular coaxial cables.

Appendix 2

● The "sys.ini" file example

The "sys.ini" file configures the following definitions.

- Number of Ethernet interfaces in the WV-ASC970 Server
- IP Address of each Ethernet interface
- WJ-SX850 Frame definitions
- Process interface assignment
- OSD control settings
- OSD Time & Date format definitions
- Unit ID for multiple domains
- Log settings
- Alarm text display settings
- Routing definitions
- RS232C port definitions for redundant system
- Retrieve and delete timing definitions for WV-ASM970 Time-Line feature

Text appearing in blue is explanatory, and not part of the "sys.ini" file.

INTERFACES section

Note:
- The WV-ASC970 Server can support up to three Ethernet network interfaces.
- When support the existing SX850/SX650 analog matrix switcher with MPU850/855/955A system, it is necessary to change the following IP addresses to meet the system.

[INTERFACES]
***{ Number of interfaces in the system}
Numinterfaces=3
The number used here is the number of the Ethernet ports on WV-ASC970 Server.
***{ Interface Definitions }
***{ Interface<Number>=<IPA>,<SUBNET MASK>,<BOOT SERVER IPA> }
***{ !! Note: The InterfaceX IPAs must match the MainX CPU }
***{ hardware settings in order for the System to }
***{ operate correctly!! }
***{ MainA CPU }
In Standard System, the WV-ASC970 Server should use the IP addresses that follow. In this case, the {MainB CPU}'s interface numbers should be commented with asterisks.
Interface0=172.16.192.1,255.255.0.0,172.16.192.1
Interface0 is an interface for network devices.
Interface1=172.18.0.1,255.255.0.0,172.18.0.1
Interface1 is an interface for system controller.
Interface2=192.168.200.200,255.255.255.0,192.168.200.200
Interface2 is used for Multiple domains feature. (Not currently supported)
***{ MainB CPU }
In Redundant System, the second WV-ASC970 Server should use following IP addresses (remove the asterisks below). In this case, {MainA CPU}'s interface numbers should be commented with asterisks.
***Interface0=172.16.192.2,255.255.0.0,172.16.192.2**
***Interface1=172.18.0.2,255.255.0.0,172.18.0.2**
***Interface2=192.168.200.201,255,255,255,0,192.168.200.201**

FRAMES section

Note:
- This section is only used for WV-SX850 cages definitions.
- Copy each value based on the existing WJ-MPU850/855's "sys.ini" file.

[FRAMES]
***{ MX Frame definition from Admin file }
***{ MXSW has format <num_rows>,<num_cols>,<interface_num> }
***{ All others use <num_functions>,<interface_num> }
MXSWFunction=8,4,0
MXCONTFunction=8,0
MXOSDFunction=2,0
MXDIOFunction=2,0
MXRMSFunction=0,0

PROCS section

This section tells the system which interface is to be used by certain process files.

[PROCS]
***{ Process Interface Assignments }
***{ Format: <Process Name>=<interface_num> }
***{ Set these three to the interface_num of the Ethernet keyboards: }
Keybp=1
Mxconts=1
Mxpfw=1
"1" means interface1 in [INTERFACES] section. WV-ASC970 Server has 3 software processes (listed above) to communicate to a CU950. All processes should use same interface number. Factory default setup is interface "1".
***{ Set Swcpu to the same interface_num for all unit CPUs: }
Swcpu=0
"0" means interface0 in [INTERFACES] section. In case of Redundant System, Both CPUA and CPUB must be assigned the same interface_num. Factory default setup is interface "0".
***{ Set UnitManager to the same interface_num for all system CPUs: }
UnitManager=0
***{ Set CSntp to the interface_num for EXTERNAL SNTP operation: }
CSntp=0
Not currently supported
***{ Set SSntp to the same interface_num for all system CPUs: }
SSntp=0
Not currently supported

OSD section

All settings in this section are set to factory default, which provide the best monitor layout.

[OSD]
***{ Initial OSD display position }
***{ Alarm text is placed on the General Status line. }
***{ Format: <DisplayItemPosition>=<x-position>,<y-position> }

TimeDatePosition=1,1
CamTitlePosition=1,16
MonStatusPosition=1,15
GenStatusPosition=1,14
***{ Time-Date, Camera Title and Camera ID Controls }
***{ Code 2 takes effect only if source is MXOSD }
***{ Format: <Control Name>=<control code> }
***{ control code 0 - OFF }
***{ control code 1 - ON }
***{ control code 2 - By Operator }
TimeDateControl=2
CamTitleControl=2
CamIDControl=2
***{ Time and Date display format }
***{ Format: TimeDateFormat=<format> }
***{ format 0 - DD/MM/YYYY }
***{ format 1 - MM/DD/YYYY }
***{ format 2 - DD/Mmm/YYYY }
***{ format 3 - YYYY/MM/DD }
***{ format 4 - Mmm/DD/YYYY }
***{ format 5 - DD/MM/'YY }
***{ format 6 - MM/DD/'YY }
***{ format 7 - DD/Mmm/'YY }
***{ format 8 - 'YY/MM/DD }
***{ format 9 - Mmm/DD/'YY }
TimeDateFormat=1
***{ Time-Hour Display format }
***{ Format: TimeHourFormat=<format> }
***{ format 0 - 12 Hour }
***{ format 1 - 24 Hour }
TimeHourFormat=0

UNIT section

Note:
- The unit ID should be unique number from 1 to 64 in the multiple domain system. In case of single domain system, this number should be "1".

[UNIT]
***{ The unit ID should be the same as the one defined in }
***{ the Global Admin database for this unit. }
***{ For single-unit systems, use ID=1. (ID=0 is invalid) }
ID=1

LOG section

This section sets the frequency with which log files are saved to hard disk. The defaults below have the logs being copied every 10 minutes and stored for 7 days.

[LOG]
***{ This section is optional. It is not required unless }
***{ System defaults are not acceptable. Delete the }
***{ single asterisks below to make this section active. }
***{ Log generation/save characteristics }
***{ Format: <LogFileName>=<Minutes>,<Days> }
***{ Minutes = Frequency to copy to HD (1 - 30 min) }
***{ Note: Values outside this range = 1 min. }
***{ Days = days to save on HD (5 - 30) }
***{ Mode = 0 - off (default) }
***{ 1 - on }
UserLog=10,7,1
SwLog=10,7,0
AlarmLog=10,7,1
VideoLossLog=10,7,1

RS232ALARM section

Note:
- This section is legacy setting for existing WJ-MPU955 and should not be changed.

All RS232C ports can be set in the admin console for the alarm interface. This section describes the characteristics for the external alarm port only. Other use of the port, such as for an external controller, must be configured using the admin console.

[RS232ALARM]
***{ This section is optional. It is not required unless }
***{ System defaults are not acceptable. Delete the }
***{ single asterisks below to make this section active. }
***{ Enable/Disable Serial Alarms by port }
***{ Format: AlarmPort=<port 1>,<port 2>,<port 3> }
***{ port # = use "1" to indicate desired port (only one) }
***{ port # = use "0" to indicate ports not desired }
***AlarmPort=1,0,0**

ALARMTEXTDISPLAY section

This section sets up the characteristics of the alarm text - whether alarm text only or alarm and action text.

There is a 38 character maximum for alarm text.

[ALARMTEXTDISPLAY]
***{ This section is optional. It is not required unless }
***{ System defaults are not acceptable. Delete the }
***{ single asterisks below to make this section active. }
***{ Alarm Text Display format }
***{ Format: AlarmTextDisplay=<option> }

***{ option 0 - Display Alarm Text only }
***{ option 1 - Display both Alarm Text (20 chars) }
***{ and Action Text (18 chars) }
AlarmTextDisplay=1

SYSTEM section

Note:
- This section should not be changed.

Use the admin console to select the correct CPU size.

[SYSTEM]
***{ This section is optional. It is not required unless }
***{ System defaults are not acceptable. Delete the }
***{ single asterisks below to make this section active. }
***{ Format: Keyboards=<num of controllers on this unit> }
***{ Cameras=<num of cameras on this unit> }
***{ Monitors=<num of monitors on this unit> }
***Keyboards=64**
***Cameras=2048**
***Monitors=1024**

ROUTING section

Note:
- This section should not be changed.

This section allows the setting of certain network parameters. If changes are necessary, consult your network administrator.

[ROUTING]
***{ This section is optional to the system. It is only }
***{ required for external gateway. Delete the single }
***{ asterisks to make this section active. }
***{ Only one default gateway is allowed! }
***{ Format: default=<gateway IPA> }
The factory default settings below are up is commented out by "*".
*** default=192.168.200.1**
***{ Network entries must be grouped together although any number of entries is allowed. }
***{ Format: network=<destination>,<gateway>,<netmask> }
***network=64.0.0.0,192.168.200.44,255,0,0,0**
***network=88.0.0.0,192.168.200.88,255,0,0,0**
***network=33.5.0.0,192.168.200.66,255,0,0,0**
***network=64.0.0.0,192.168.200.55,255,0,0,0**
***{ Host entries must be grouped together although any number of entries is allowed. }
***{ Format: host=<destination>,<gateway> }
***host=33.44.55.66,192.168.200.66**
***host=11.22.33.44,192.168.200.44**

REDUDANT section

This section assigns the RS232C Port for the redundant communication. The RS232C Port cannot be shared between the redundant communication and serial alarm interface.

```
[REDUNDANT]
***{ The RS232Port can be used as redundant communication, }
***{ if Backup CPU is checked in the Admin Console.        }
***{ If no check, the port can be used for serial alarm when }
***{ Admin Console set the RS232C Controller.              }
***{   Note:                                               }
***{ The RS232Port should not share the RS232C Controller  }
***{ defined in the Admin Console.                         }
***{ The RS232Port starts with "0", while RS232C Controller }
***{ in the Admin Console starts with "1".                 }
***{  Format: RS232Port=<port #>                           }
***{     0 = first RS232C Port of your server              }
***{     1 = second RS232C Port of your server (if existing) }
***{     2 = third  RS232C Port of your server (if existing) }
RS232Port=0
```

TIMELINE section

This section allow user to change some settings for the ASM970 Client Software Time-Line feature.

```
[TIMELINE]
***{ This section allow user to change polling frequency of                    }
***{ retrieving the DVR and alarm information for the ASM970 Client Software  }
***{ Time-Line feature.                                                        }
***{ Format: TimeLine=< Minutes >,<Days>,<Model>                               }
***{ Minutes = Frequency to retrieve from DVR (5 - 30 min)                     }
***{ Days = days to save on HD (1 - 9999)                                      }
***{ Mode = 0 - off                                                            }
***{            1 – on (default)                                               }
TimeLine=10,7,1
***{ This section allow user to change delete timing                          }
***{ of saving DVR and alarm information in ASC970.                            }
***{ Format: DeleteTime=< Hour > }
***{ Hour = Time to delete the saving information (00:00 – 23:59)              }
DeleteTime=02:00
```

Alive Monitoring section

This section allow user to change some settings for the Alive Monitoring feature.

```
[ALIVEMONITORING]
***{ This section allow user to change the number of alive monitoring}
***{ of devices(Camera and Recorder) at a time.}
***{ Format: CamAliveMonitoringNum=<Max Number > }
***{ Max Number = Number of alive monitoring at a time for Camera (1 - 256) }
***{ Format: RecAliveMonitoringNum=<Max Number > }
```

***{ Max Number = Number of alive monitoring at a time for Recorder (1 - 128) }
CamAliveMonitoringNum=256
RecAliveMonitoringNum=128
***{ This section allow user to change the frequency of monitoring. }
***{ This section is applied for Camera and Recorder. }
***{ Format: AliveMonitoringFrequency=<Frequency> }
***{ Frequency = Frequency of monitoring (10 – 3600 sec) }
AliveMonitoringFrequency=10
***{ This section allow user to change timeout, retry frequency and retry count }
***{ of alive monitoring for HD300 series.}
***{ Format: AliveMonitoringTimeout_HD300=<Timeout> }
***{ Format: AliveMonitoringRetryFrequency_HD300 =<Retry Frequency> }
***{ Format: AliveMonitoringRetryCount_HD300 =<Retry Count> }
***{ Timeout =Time-out of monitoring for HD300 series (1 – 60 sec) }
***{ Retry Frequency=Retry frequency of monitoring for HD300 series (1 – 60 sec) }
***{ Retry Count=Retry count of monitoring for HD300 series (1 – 10) }
AliveMonitoringTimeout_HD300=20
AliveMonitoringRetryFrequency_HD300=6
AliveMonitoringRetryCount_HD300=6
***{ This section allow user to change timeout, retry frequency and retry count }
***{ of alive monitoring for DVR (except HD300 series).}
***{ Format: AliveMonitoringTimeout_DVR=<Timeout> }
***{ Format: AliveMonitoringRetryFrequency_DVR=<Retry Frequency> }
***{ Format: AliveMonitoringRetryCount_DVR=<Retry Count> }
***{ Timeout = Time-out of monitoring for DVR (1 – 60 sec) }
***{ Retry Frequency = Retry frequency of monitoring for DVR (1 – 60 sec) }
***{ Retry Count = Retry Count of monitoring for DVR (1 – 10) }
AliveMonitoringTimeout_DVR=12
AliveMonitoringRetryFrequency_DVR=3
AliveMonitoringRetryCount_DVR=3
***{ This section allow user to change timeout, retry frequency and retry count }
***{ of alive monitoring for Camera).}
***{ Format: AliveMonitoringTimeout_CAM=<Timeout> }
***{ Format: AliveMonitoringRetryFrequency_CAM=<Retry Frequency> }
***{ Format: AliveMonitoringRetryCount_CAM=<Retry Count> }
***{ Timeout =Time-out of monitoring for Camera (1 – 60 sec) }
***{ Retry Frequency=Retry frequency of monitoring for Camera (1 – 60 sec) }
***{ Retry Count=Retry count of monitoring for Camera (1 – 10) }
AliveMonitoringTimeout_CAM=60
AliveMonitoringRetryFrequency_CAM=3
AliveMonitoringRetryCount_CAM=3
***{ This section allow user to change timeout, retry frequency and retry count }
***{ of alive monitoring for Encoder).}
***{ Format: AliveMonitoringTimeout_ENC=<Timeout> }
***{ Format: AliveMonitoringRetryFrequency_ENC=<Retry Frequency> }
***{ Format: AliveMonitoringRetryCount_ENC=<Retry Count> }
***{ Timeout = Time-out of monitoring for Encoder (1 – 60 sec) }
***{ Retry Frequency = Retry frequency of monitoring for Encoder (1 – 60 sec) }
***{ Retry Count = Retry count of monitoring for Encoder (1 – 10) }
AliveMonitoringTimeout_ENC=60
AliveMonitoringRetryFrequency_ENC=3

AliveMonitoringRetryCount_ENC=2
***{ This section allow user to change retrieve frequency of alive monitoring}
***{ from WV-ASM970.}
***{ Format: ASM970AliveMonitoringFrequency=<Retrieve Frequency> }
***{ Retrieve Frequency = Retrieve Frequency from WV-ASM970 (30 – 3600 sec) }
ASM970AliveMonitoringFrequency= 30

ND400 Backup section

This section allow user to change some settings for the ND400 Backup feature.

[ND400BACKUP]
***{ This section allow user to change the download interval of setup data from WJ-ND400. }
***{ Format: RetrieveFrequency=<Retrieve Frequency > }
***{ Retrieve Frequency = Retrieve frequency of configuration data from WJ-ND400 }
***{ (60 – 3600 sec) }
RetrieveFrequency=60
***{ This section allow user to change the setting of deleting switchover history. }
***{ Format: DeleteHistoryOnBoot=<Delete flag > }
***{ Delete flag = Delete switch over history when WV-ASC970 is reset. (0 or 1) }
***{ 0: not delete, 1: delete}
DeleteHistoryOnBoot=0

DNS section

This section allow user to change the setting of DNS server.

[DNS]
***{ This section allow user to change the setting of DNS server. }
***{ Format: DNS1 =<IP address of DNS server 1> }
***{ Format: DNS2 =<IP address of DNS server 2> }
***{ Format: DNS3 =<IP address of DNS server 3> }
***DNS1 = 192.168.0.1**
***DNS2 = 192.168.0.2**
***DNS3 = 192.168.0.3**

ERRORP section

Note:
- This section should not be changed.
- This section allows changes to Error Log level.

[ERRORP]
ErrorLevel=3

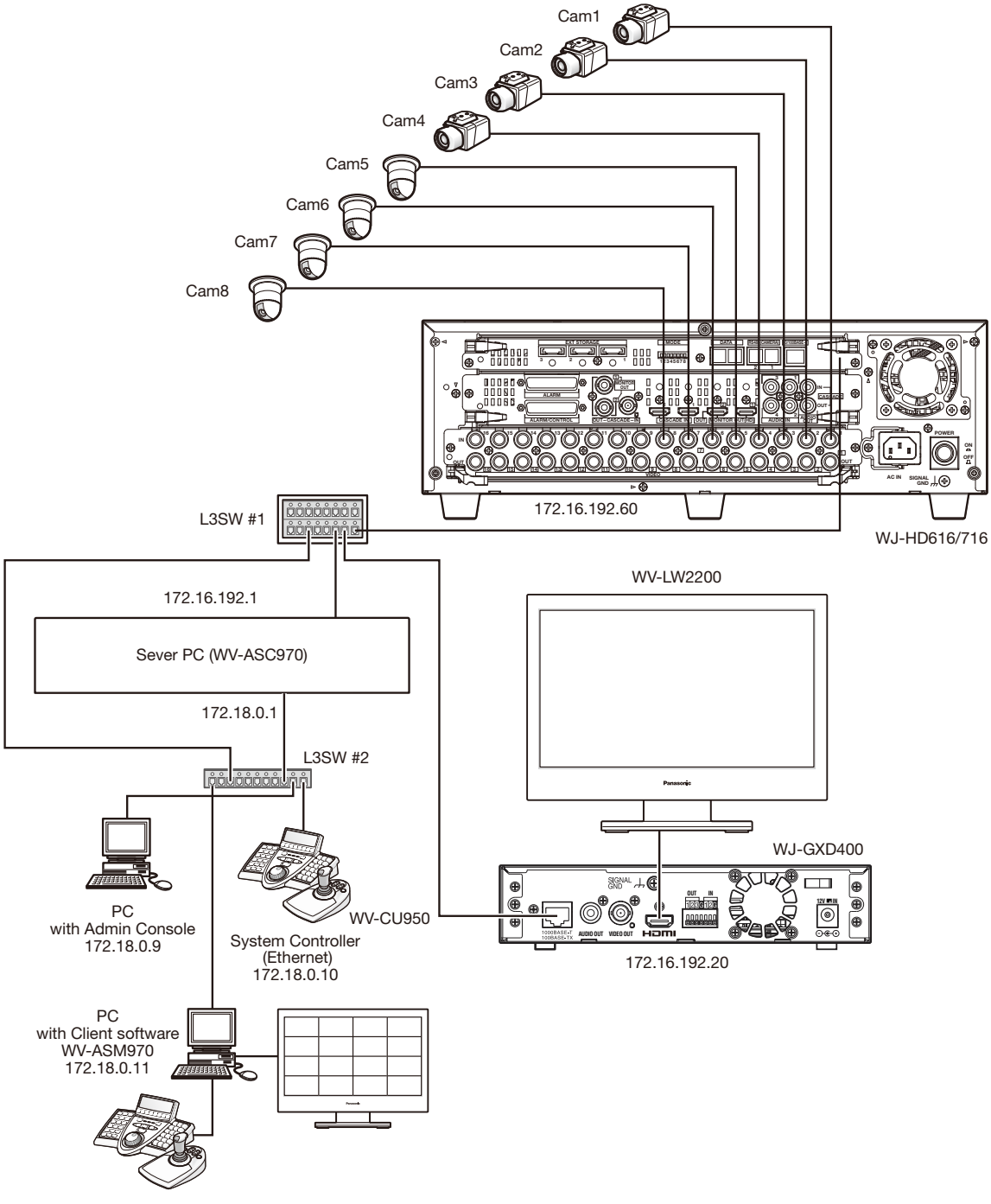
Appendix 3

WJ-HD616/WJ-HD716 IP switch node Configuration Example

The WJ-HD616 and WJ-HD716 can send the video stream through the network. The WV-ASC970 Server can handle and display the video stream on WV-GXD400 and/or WV-ASM970 monitors. In this case, the DVR model should be the "WJ-HD616:NW port" or "WJ-HD716:NW port" in the WJ-ASC970 Admin Console. Also users can control the camera connected to WJ-HD616 or WJ-HD716.

Note:

- The WV-ASC970 Server cannot handle both analog video output and video stream simultaneously for the same WJ-HD616/WJ-HD716.
- The WJ-ASC970 Server cannot display the same video stream from WJ-HD616/WJ-HD716 on more than two monitors of same WJ-GXD400 or WV-ASM970.



● Decoder WJ-GXD400 Setup

Refer to WJ-GXD400 Operational Manual.

Dec #	IP Address	Subnet Mask	Port	OSD Position			Schedule	Authentication ID/Passwd
				Camera Title	Time Date	Additional Info		
1	172.16.192.20	255.255.0.0	80	Left Lower -2	Right Upper +1	Left Lower -1	None	Default

● Digital Disk Recorder WJ-HD616/716 Setup

Refer to WJ-HD616/WJ-HD716 Operational Manual to set following configuration.

DVR#	Line Speed	HTTP PORT	DHCP	IP Address	Gateway	Schedule	Authentication ID/Passwd
1	AUTO	0080	OFF	172.16.192.60/16	0.0.0.0	Always Recording	Default

Note: The WJ-HD616 or WJ-HD716 series should be set the alarm suspend configuration.

● L3SW #1 Setup

Set a restriction for the multicast packets not to flow to Server PC port.
Valid the IGMP V2 due to support Multicast packets.

● L3SW #2 Setup

Set a restriction for the multicast packets to transfer to the PC with client software WV-ASM970 only.

● Client Software WV-ASM970 PC setup

KBD #	IP Address	Subnet Mask
2	172.18.0.11	255.255.0.0

Troubleshooting

Before contacting technical support, please check the following symptoms and their possible causes and solutions. If the solutions suggested do not solve the problem, or if the symptom is not listed below, contact your installer or sales representative.

System Controller-Related problems

Symptom	Possible cause/Possible solution	Reference page
WV-CU950 controller fails to start. LCD shows; "Connecting to Main CPU ... "	Check the network connection between the Server and WV-CU950 controller. Check the controller database and make sure it has the correct controller Ethernet address.	WV-ASC970 Admin Console User's Guide

Global Operation-Related problems

Symptom	Possible cause/Possible solution	Reference page
Global Operator fails to login	Check whether global database has been updated for this operator. Users typed correct password.	WV-ASC970 Admin Console User's Guide
Global Operator fails to select a global camera	Check whether the global operator subjects to the camera unit partitioning. Check whether you enter a correct unit id for the global camera.	P. 27 P. 8
Global Operator fails to start a global tour sequence	Check whether the global operator subjects to the tour sequence unit partitioning. Check whether you enter a correct unit id for the global tour our sequence.	P. 27 P. 10

Video Switch Node-Related problems

Symptom	Possible cause/Possible solution	Reference page
No video switch between monitors in IP switch node and cameras in SX650 node	Check the video link direction in the "Routing" menu of the Admin Console. Video links on the SX650 side should be the source node and NT304/NT314/GXE500 side should be the destination side.	P. 27

Client Software-Related problems

Symptom	Possible cause/Possible solution	Reference page
A client software WV-ASM970 cannot login to the WV-ASC970 after 2nd time.	Check whether the client network group is same as the server's one that is configured in Admin Console's CPU screen.	WV-ASC970 Admin Console User's Guide

Redundant-Related problems

Symptom	Possible cause/Possible solution	Reference page
The Active WV-ASC970 reboots frequently.	Check whether the RS232C port for the redundant communication conflicts the use of RS232C alarm. They cannot share the same RS232C port.	P. 31

WV-ASM970 Admin Console Configuration-Related problems

Symptom	Possible cause/Possible solution	Reference page
The WV-ASC970 does not work as expected when the system administrator updates the Admin database.	Check whether the updated items belong to the global database. If yes, put the global database and reboot the WV-ASC970.	WV-ASC970 Admin Console User's Guide

DVR Disk Configuration Menu-Related problems

Symptom	Possible cause/Possible solution	Reference page
The WV-CU950 or WV-ASM970 cannot exit from the DVR Disk Configuration menu once entered. Because the DVR forces a network user to logout and the exit operation is ignored.	Exit by the front panel operation of the DVR.	–

Event Operation – Related problems

Symptom	Possible cause/Possible solution	Reference page
The event operation does not work as Admin Console setting.	Click the RESET button on Reset tab of Admin Console's CPU Units menu to reboot the Server PC.	–

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